DVD Receiver

MX2500/01

Service
Service
Service

Service Manual

COMPACT disc DIGITAL AUDIO | COMPACT disc DIGITAL AUDIO Recordable | VIDEO CD | RW DVD + ReWritable | DOLBY DIGITAL PRO LOGIC II | MP3-CD PLAYBACK mp3 | COMPACT disc DIGITAL VIDEO | COMPACT disc DIGITAL AUDIO ReWritable

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CLASS 1
LASER PRODUCT

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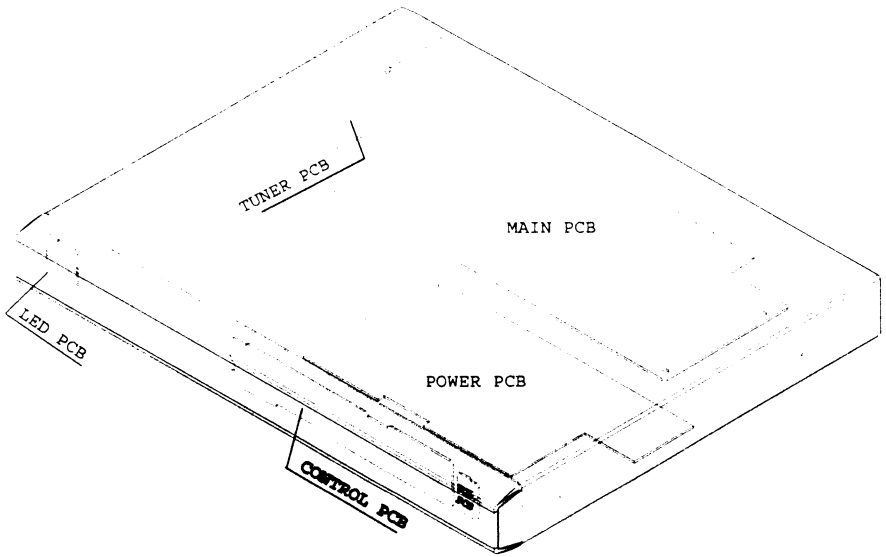
Published by KC-ET0409 Service Audio Printed in The Netherlands Subject to modification.

GB 3139 785 30940

Version 1.0

PHILIPS

LOCATION OF PC BOARDS



VERSION VARIATION:

Type /Versions: / Features & Board in used:	MX2500 / 01
RDS	
Rotary Encoder (volume control)	x
Aux Input	x
Digital Output	x
Line Output	x
Progressive scan	x
Power supply (220 ~ 240 V)	x

SPECIFICATIONS

AMPLIFIER SECTION

Output power
- Front ..... 30 W RMS / channel
- Rear ..... 30 W RMS / channel
- Center ..... 30 W RMS
- Subwoofer ..... 50 W RMS

Frequency Response ..... 180 Hz - 14 kHz / ¡ Ó3 dB
Signal-to-Noise Ratio..... > 60 dB (A-weight)
Input Sensitivity
AUX/TV In .....400 mV

TUNER SECTION

Tuning Range ..... FM 87.5 – 108 MHz (50 kHz steps)
..... AM 531 – 1602 kHz (9 kHz steps)
26 dB Quieting Sensitivity ..... FM 20 dBf
26 dB Quieting Sensitivity ..... AM 5000 µV/m
Image Rejection Radio ..... FM 25 dB
..... AM 28 dB
IF Rejection Ratio ..... FM 60 dB
..... AM 24 dB
Signal-to-Noise Ratio..... FM 55 dB
..... AM 40 dB
AM Suppression Ratio ..... FM 30 dB
Harmonic Distortion .....FM Mono 3 %
..... FM Stereo 3 %
..... AM 5 %
Frequency Response ..... FM180 Hz – 10 kHz / ±6 dB
Stereo Separation.....FM 26 dB (1 kHz)
Stereo Threshold ..... FM 23.5 dB

DISC SECTION

Laser Type ..... Semiconductor
Disc Diameter ..... 12cm / 8cm
Video Decoding ..... MPEG-2 / MPEG-1
Video DAC ..... 10 Bits
Signal System ..... PAL / NTSC
Video Format ..... 4:3 / 16:9
Video S/N ..... 56 dB (minimum)
Composite Video Output ..... 1.0 Vp-p, 75 Ω
S-Video Output ..... Y - 1.0 Vp-p, 75 Ω
..... C - 0.286 Vp-p, 75 Ω
Audio DAC .....24 Bits / 96 kHz
Frequency Response ..... 4 Hz - 20 kHz (44.1kHz)
..... 4 Hz - 22 kHz (48kHz)
..... 4 Hz - 44 KHz (96KHz)
Digital Output .....
..... SPDIF (Sony Philips digital interface) Coaxial
- PCM ..... IEC 60958
- Dolby Digital ..... IEC 60958, IEC 61937

MAIN UNIT

Power Supply Rating .....220- 240 V; 50 Hz
Power Consumption 120W
Dimensions (w × h × d) ..... 435 × 53× 365 (mm)
Weight 4.07kg

SPEAKERS

Front/Rear speakers
System .....1-way, Bass Reflex system
Impedance ..... 8 Ω
Frequency response ..... 120 Hz – 20 kHz
Dimensions (w × h × d) ..... 90 × 92 × 87 (mm)
Weight 0.53kg

CENTER SPEAKERS

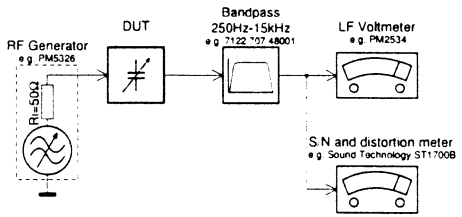
System .....1-way, Bass Reflex system
Impedance ..... 8 Ω
speaker drivers ..... 1x 3"C
Frequency response ..... 120 Hz – 20 kHz
Dimensions (w × h × d) ..... 90 × 92 × 87 (mm)
Weight 0.53kg

PASSIVE SUBWOOFER

Impedance ..... 4 Ω
speaker drivers ..... 6 1/2" woofer
Frequency response ..... 30 Hz – 120 kHz
Dimensions (w × h × d)..... 220 × 212× 350(mm)
Weight .....3.57 kg

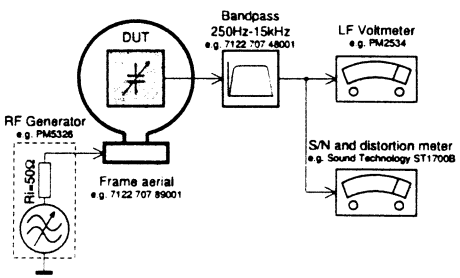
MEASUREMENT SETUP

Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilottone (19kHz, 38kHz).

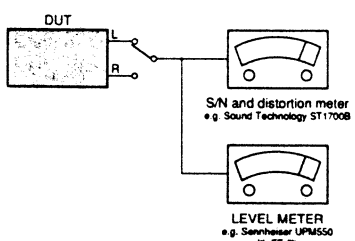
Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage.
Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

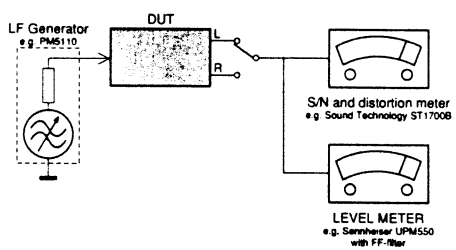
CD

Use Audio Signal Disc SBC429 4822 397 30184
(replaces test disc 3)



Recorder

Use Universal Test Cassette CrO2 SBC419 4822 397 30069
or Universal Test Cassette Fe SBC420 4822 397 30071



SERVICE AIDS

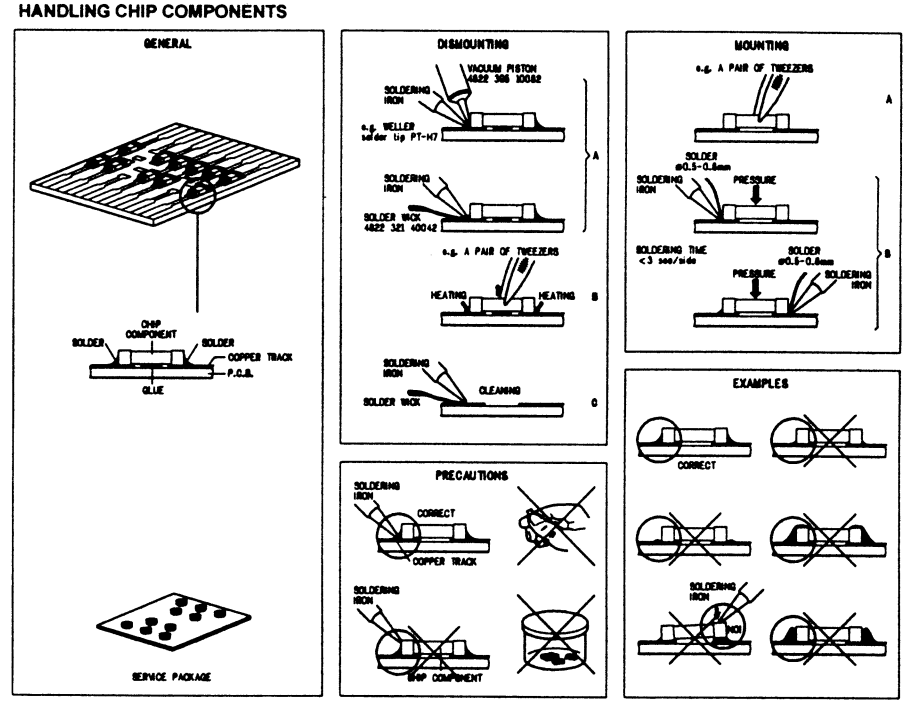
Service Tools:

Universal Torx driver holder 4822 395 91019
Torx bit T10 150mm 4822 395 50456
Torx driver set T6-T20 ..... 4822 395 50145
Torx driver T10 extended 4822 395 50423

Compact Disc:

SBC426/426A Test disc 5 + 5A 4822 397 30096
SBC442 Audio Burn-in test disc 1kHz 4822 397 30155
SBC429 Audio Signals disc 4822 397 30184
Dolby Pro-logic Test Disc 4822 395 10216

HANDLING CHIP COMPONENTS



ESD

(GB) **WARNING**

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

(NL) **WAARSCHUWING**

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(F) **ATTENTION**

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux decharges statiques (ESD).
Leur longevité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) **WARNUNG**

Alle ICs und viele andere Halbleiter sind empfindlich gegenuber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kan die Lebensdauer drastisch reduzieren.
Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.
Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

(I) **AVVERTIMENTO**

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

(GB) **ESD PROTECTION EQUIPMENT**

Complete Kit ESD3 (small tablemat, wristband, connection box, estention cable and earth cable 4822 310 10671
Wristband tester 4822 344 13999

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

Safety components are marked by the symbol ⚠.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

De Veiligheidsonderdelen zijn aangeduid met het symbol ⚠.

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

Less composants de sécurité sont marqués ⚠.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Original zustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

Sicherheitsbauteile sind durch das Symbol ⚠ markiert.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

Componenty di sicurezza sono marcati con ⚠.

(GB)

After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground *to assure no shock hazard exist. The leakage current must not exceed 0.5mA.*

CLASS 1
LASER PRODUCT

(GB) **Warning !**

Invisible laser radiation when open.
Avoid direct exposure to beam.

(S) **Varning !**

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

(SF) **Varoitus !**

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen!

(DK) **Advarse !**

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

(F)

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

System, Region code, Tuner, etc. setting procedure

1) System Reset

a) Press "SYSTEM" button on R/C. TV show "SETUP"
b) Select the menu using the "▼" and "▶" button on R/C
c) Go feature setup page to do system reset

2) Region Code Change

After replacement / repair of the MPEG board, the customer setting and the region code may lost. Changing the Region code will put the player back in the state which it has left the factory.

Region Code

1	USA
2	EU
3	AP
4	Australia, NZ, Latam
5	RUSSIA, INDIA
6	CHINA

TV System

1	NTSC
2	PAL
3	AUTO

Menu/ Audio Subtitle (AS) Language

1	English
2	English
3	English
4	English

AFS

001	LX3000D/LX3500D /MRD200
002	MX3600D/MX3800
003	LX3700D/LX3750W
005	MRD210
006	MX3660D
008	FW-D550
010	MRD120/MX6050

oem derivative

08

- region code = 1 digit
- tv system = 1 digit
- "as/menu lang" = 1 digit
- "AFS" = "architechture Feature Set" = 3 digits

This field is used to define the architecture / features sets for each product.

- *"oem derivative" = 2 digit*

This field is use to define the OEM set. This will affect the background display.

Hence in total, reprograming will be done by way of the remote control. It should run as below :-

a) Put the player in stop mode. No disc loaded.
b) Press the following key on remote control:

For MX2500/01 (Europe) :
<789> <OK> <02> <PLAY>

* After the Region Code is changed it is necessary to reset the system so that the new Region Code will be fully effective. All customer setting will be lost.

* On top of the maximum number of times allowed for changing the region code is changed to 25.

* When the counter reach 25, you will not be able to further change the code until you reset the timer by the Region Code timer reset procedure

CAUTION !

This information is confidencial and may not be distributed. Only a qualified service person should reprogram the Region Code.

2-1

3) Region code change timer reset

Press below key to reset the timer :
a) In DISC source, stop mode and no disc in tray.
b) Press R/C "Play -159-PLAY" to reset timer to 25

4) Tuner area change

a) Press the "OPEN/CLOSE" button to open the set' s door
b) Press "1" "5" "9" button by using R/C.
c) TV Show "TUNER AREA"
d) Select the tuner area you want by using the "▼" and "▶" button on R/C, then press "OK" to confirm. TV show " TUNER AREA CHANGED"
If you didn' t press it in five seconds, the system will remain original status.

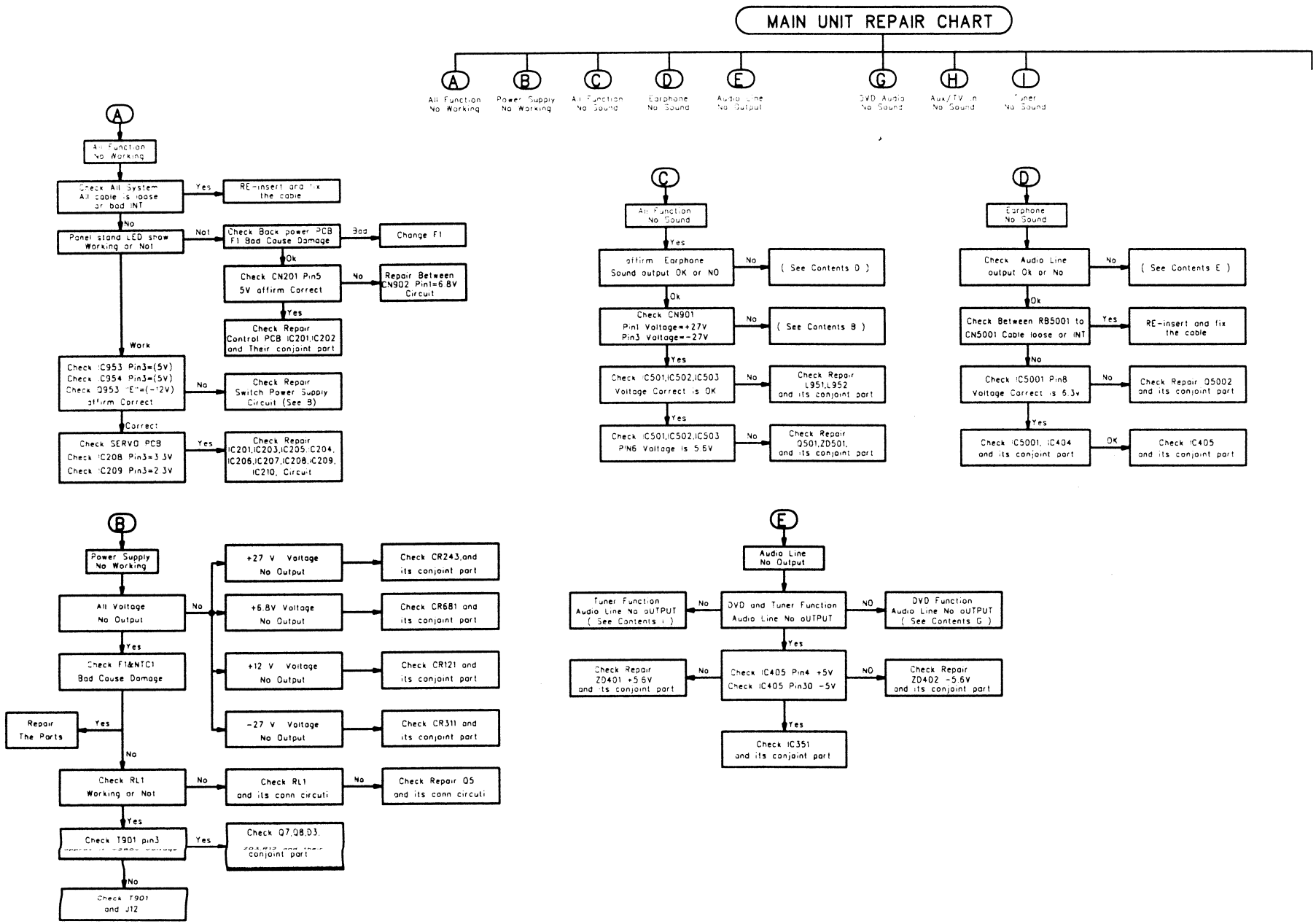
Note :-
Please refer to the above different tuner area.

5. Video Out Change

a) Press "SYSTEM" on R/C button
b) Select the menu using the "▼" and "▶" button on R/C
c) Go picture setup page select Video out item.

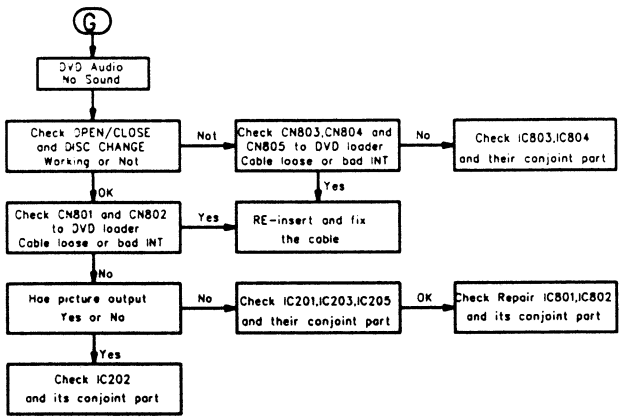
2-2

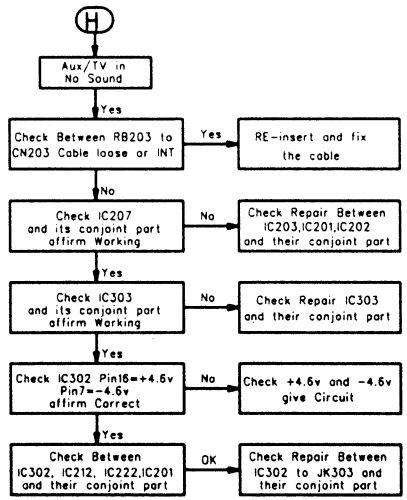
REPAIR INSTRUCTIONS (1 of 2)

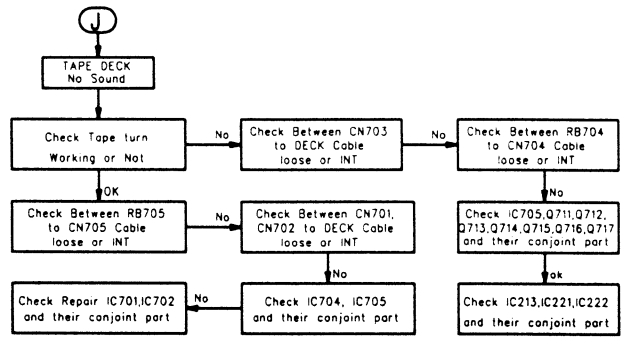


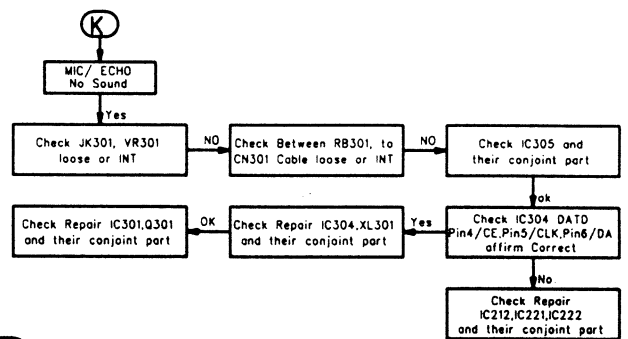
2-3

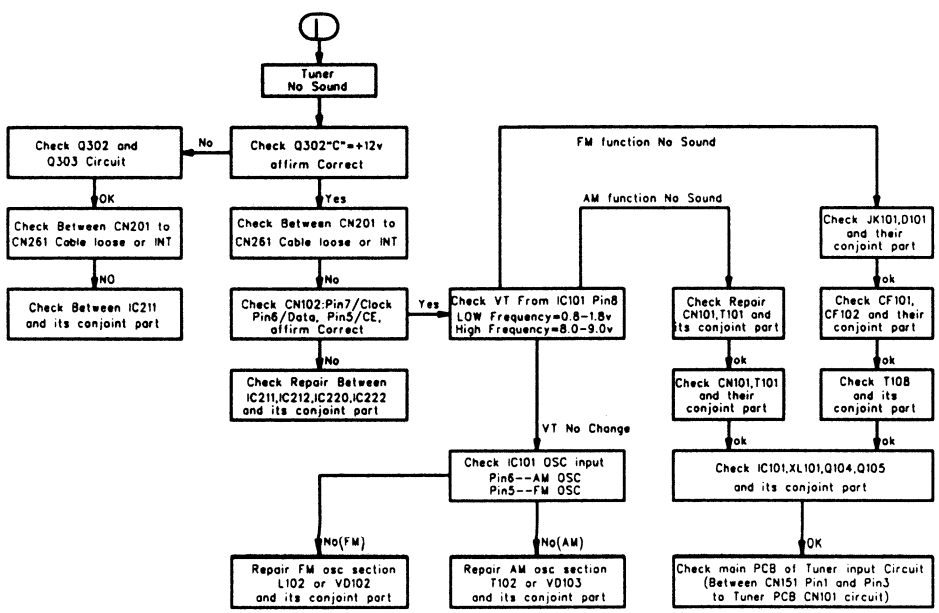
REPAIR INSTRUCTIONS (2 of 2)

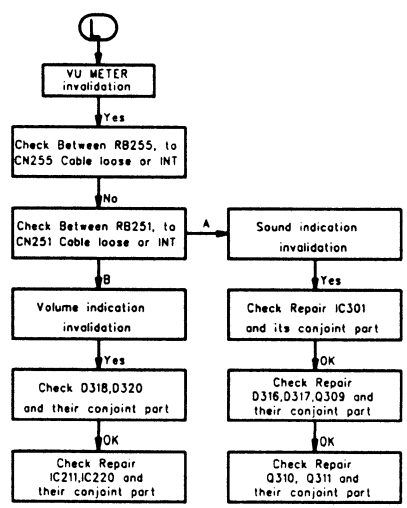

G
DVD Audio No Sound
Check OPEN/CLOSE and DISC CHANGE Working or Not
Not
Check CN803,CN804 and CN805 to DVD loader Cable loose or bad INT
No
Check IC803,IC804 and their conjoint part
OK
Yes
Yes
Check CN801 and CN802 to DVD loader Cable loose or bad INT
RE-insert and fix the cable
No
Hae picture output Yes or No
No
Check IC201,IC203,IC205 and their conjoint part
OK
Check Repair IC801,IC802 and its conjoint part
Yes
Check IC202 and its conjoint part

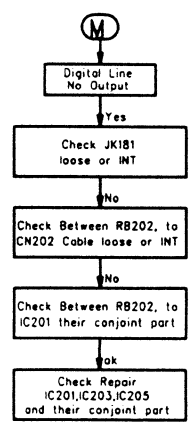

H
Aux/TV in No Sound
Yes
Check Between RB203 to CN203 Cable loose or INT
Yes
RE-insert and fix the cable
No
Check IC207 and its conjoint part affirm Working
No
Check Repair Between IC203,IC201,IC202 and their conjoint part
Yes
Check IC303 and its conjoint part affirm Working
No
Check Repair IC303 and their conjoint part
Yes
Check IC302 Pin16=+4.6v Pin7=-4.6v affirm Correct
No
Check +4.6v and -4.6v give Circuit
Yes
Check Between IC302, IC212, IC222,IC201 and their conjoint part
OK
Check Repair Between IC302 to JK303 and their conjoint part


J
TAPE DECK No Sound
Check Tape turn Working or Not
No
Check Between CN703 to DECK Cable loose or INT
No
Check Between RB704 to CN704 Cable loose or INT
OK
No
Check Between RB705 to CN705 Cable loose or INT
No
Check Between CN701, CN702 to DECK Cable loose or INT
No
Check IC705,Q711,Q712, Q713,Q714,Q715,Q716,Q717 and their conjoint part
No
ok
Check Repair IC701,IC702 and their conjoint part
No
Check IC704, IC705 and their conjoint part
ok
Check IC213,IC221,IC222 and their conjoint part




I
Tuner No Sound
Check Q302 and Q303 Circuit
No
Check Q302"C"=+12v affirm Correct
FM function No Sound
AM function No Sound
OK
Yes
Check Between CN201 to CN261 Cable loose or INT
Check Between CN201 to CN261 Cable loose or INT
NO
No
Check Between IC211 and its conjoint part
Check CN102:Pin7/Clock Pin6/Data, Pin5/CE, affirm Correct
Yes
Check VT From IC101 Pin8 LOW Frequency=0.8-1.8v High Frequency=8.0-9.0v
Check Repair CN101,T101 and its conjoint part
Check JK101,D101 and their conjoint part
No
ok
ok
Check Repair Between IC211,IC212,IC220,IC222 and its conjoint part
Check CN101,T101 and their conjoint part
Check CF101, CF102 and their conjoint part
ok
ok
VT No Change
Check T108 and its conjoint part
ok
ok
Check IC101 OSC input Pin6--AM OSC Pin5--FM OSC
Check IC101,XL101,Q104,Q105 and its conjoint part
No(FM)
No(AM)
OK
Repair FM osc section L102 or VD102 and its conjoint part
Repair AM osc section T102 or VD103 and its conjoint part
Check main PCB of Tuner input Circuit (Between CN151 Pin1 and Pin3 to Tuner PCB CN101 circuit)





DISASSEMBLY INSTRUCTIONS

Dismantling of the Front Panel Assembly

1) Open the DVD Tray by using the Open/Close Button while the Set is ON and disconnect the mains supply after removing the Tray Cover.

   Note: If this is not possible, the DVD Tray has to be open manually.

   Take a mini screw driver about 2mm diameter and make a marking 24mm from the tip as shown in figure 2. place the set on its side, insert the mini screw driver till the marking and slide it towards the right as shown in figure 1 until the Tray moves out of the Front Panel.

2) Return the set to its upright position and remove the Tray Cover as shown in Figure 3 and close the tray manually by pushing it back in.

3) Loosen 9 screws and remove the Top Cover by lifting the rear portion upwards before sliding it out towards the rear.
   - 5 screws on the back
   - 2 screws each on the left & right side

4) Loosen 7 screws & lift up the top edge of Front Panel assembly to free some catches before sliding it out towards the front.
   - 4 screws on the bottom
   - 1 screw "E" on the inside as indicated in Figure 8.
   - 1 screw each on the left & right side

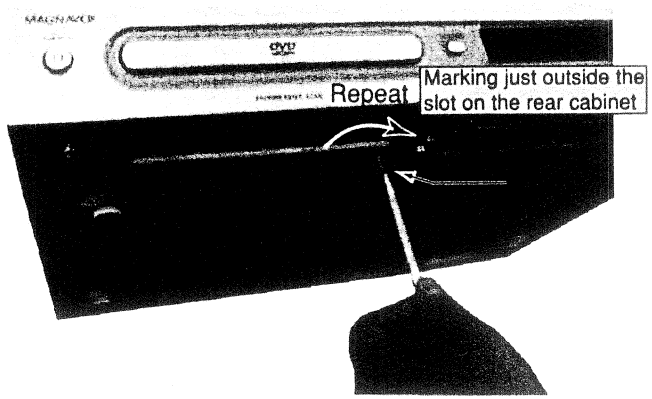


Figure 1

Figure 2

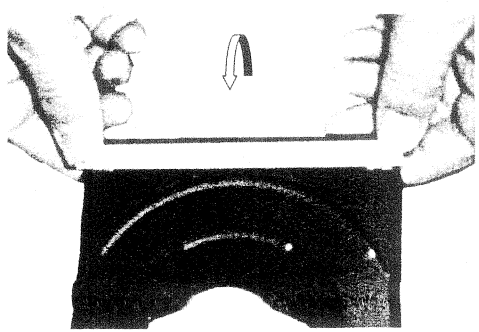


Figure 3

Dismantling of the DVD Module

1) Loosen 4 screws "A" to remove the DVD Module as shown in figure 4.

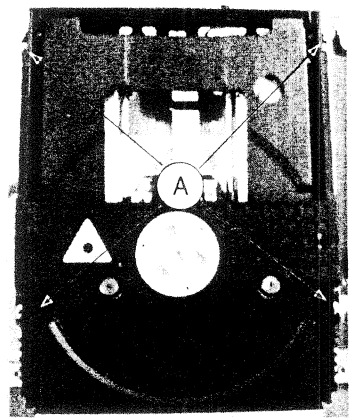


Figure 4

Dismantling of the Power Board

1) Loosen 4 screws "B" at the top of the Power Board as shown in figure 5

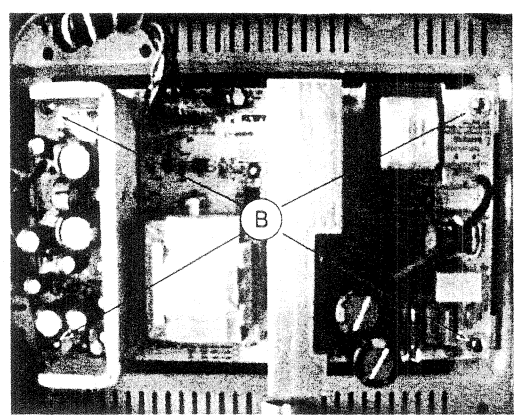


Figure 5

Dismantling of the Tuner PCB

1) Loosen 10 screw " C " at the back panel as shown in figure 7.

2) Loosen 6 screw " D " on the top of main board as shown in figure 8.

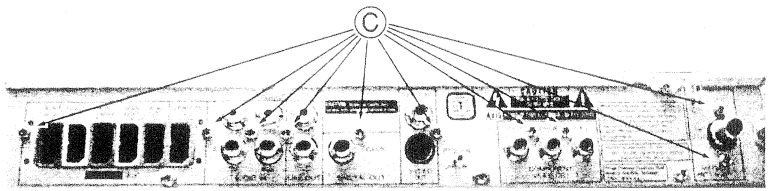


Figure 7

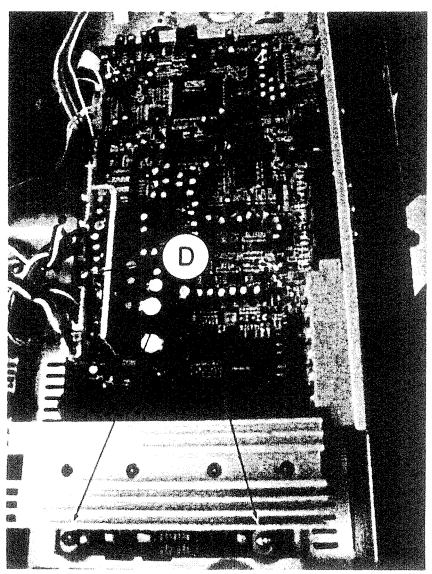
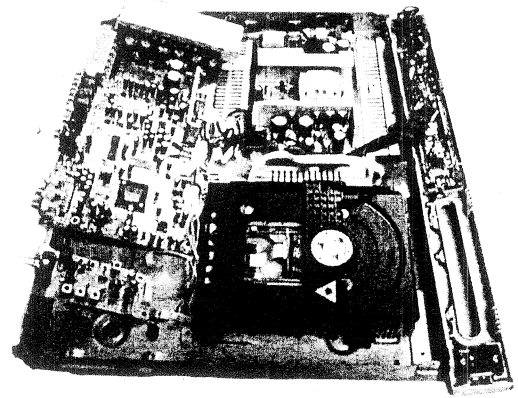


Figure 8

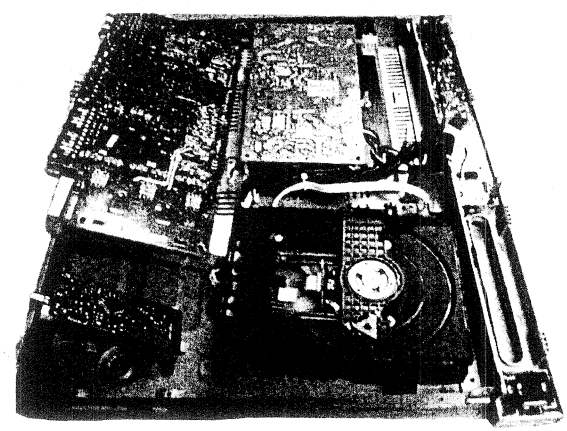
SERVICE POSITIONS

Service position A



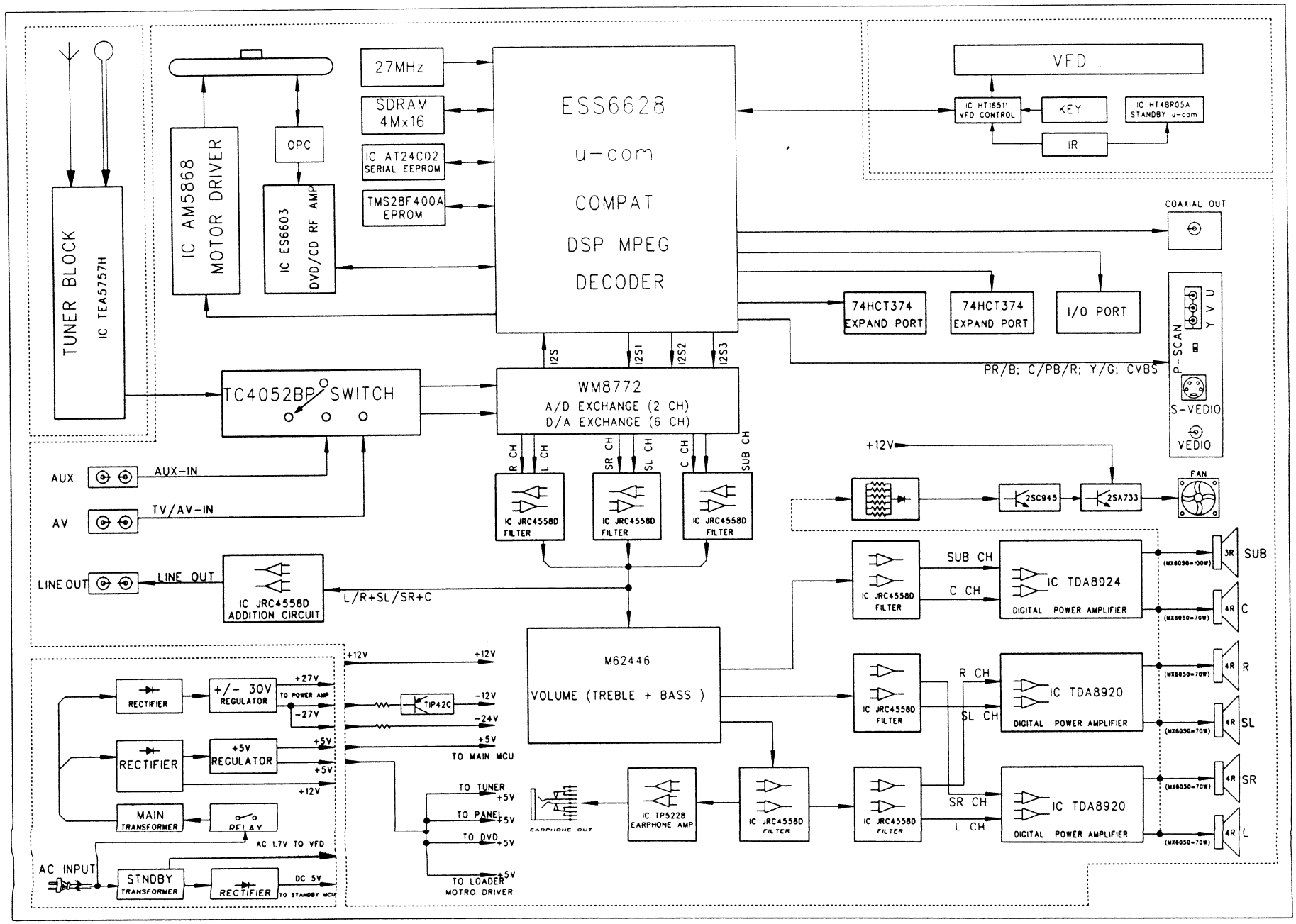
Note: In some service positions the components or copper patterns of one board may risk touching its neighbouring pc boards or metallic parts. To prevent such short-circuit use a piece of hard paper or other insulating material between them.

Service position B



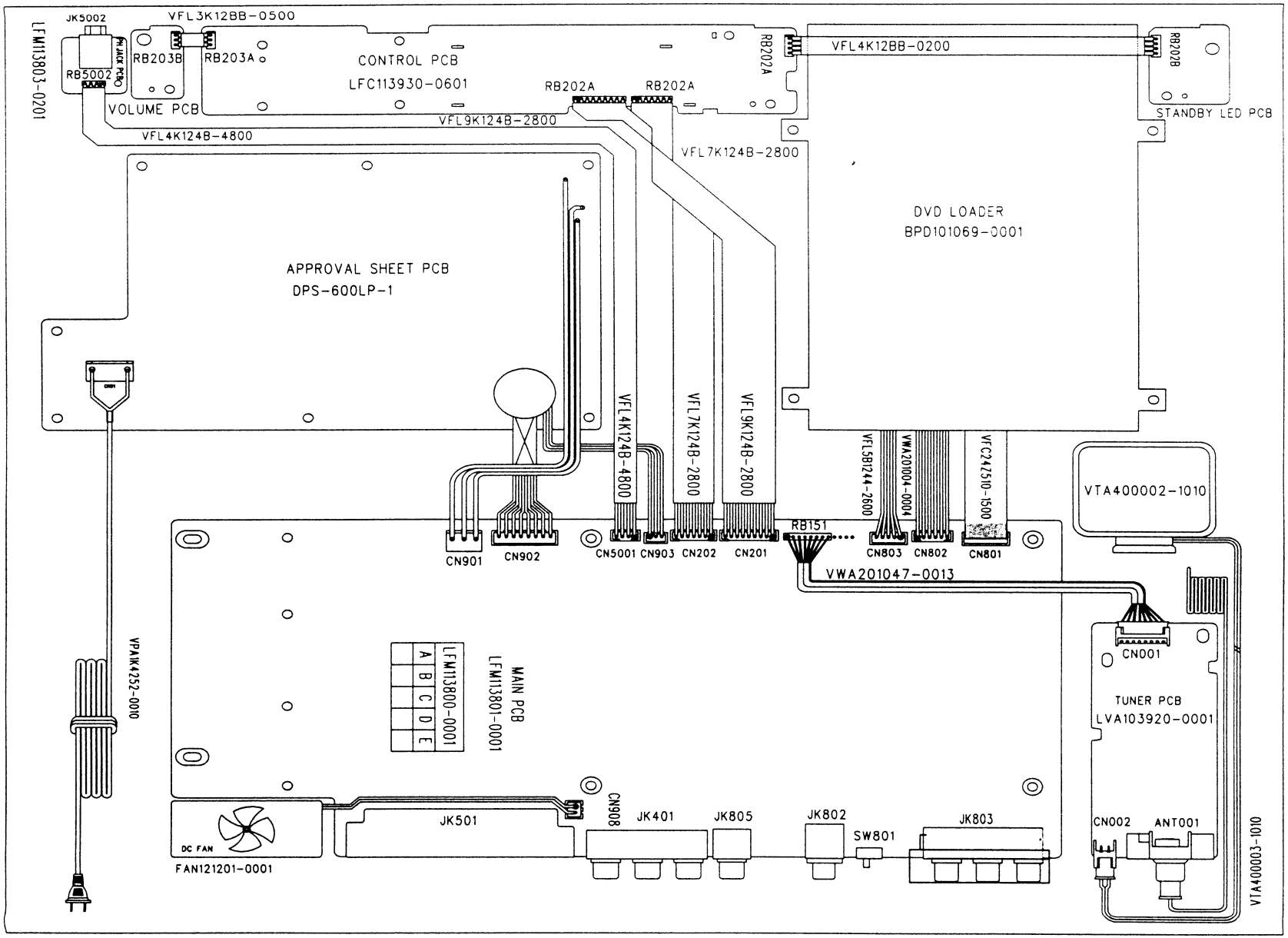
4-1

BLOCK DIAGRAM



4-2

WIRING DIAGRAM



KEY (CONTROL / STANDBY / VOL) BOARD

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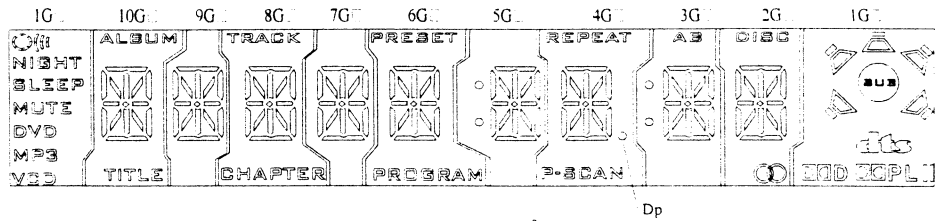
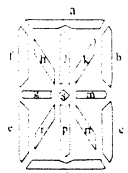
5-1

FTD DISPLAY PIN ASSIGNMENT





(2G - 10G)

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	a	a	a	a	a	a	a	a	a	
P2	b	b	b	b	b	b	b	b	b	
P3	f	f	f	f	f	f	f	f	f	
P4	h	h	h	h	h	h	h	h	h	
P5	j	j	j	j	j	j	j	j	j	
P6	k	k	k	k	k	k	k	k	k	
P7	m	m	m	m	m	m	m	m	m	
P8	s	s	s	s	s	s	s	s	s	
P9	g	g	g	g	g	g	g	g	g	
P10	c	c	c	c	c	c	c	c	c	
P11	e	e	e	e	e	e	e	e	e	
P12	r	r	r	r	r	r	r	r	r	NIGHT
P13	p	p	p	p	p	p	p	p	p	SLEEP
P14	n	n	n	n	n	n	n	n	n	MUTE
P15	d	d	d	d	d	d	d	d	d	DVD
P16						Col	Dp	Col		MP3
P17	ALBUM		TRACK		PRESET		REPEAT	A	DISC	V
P18	TITLE		CHAPTER		PROGRAM		P-SCAN	B		CD

PIN CONNECTION

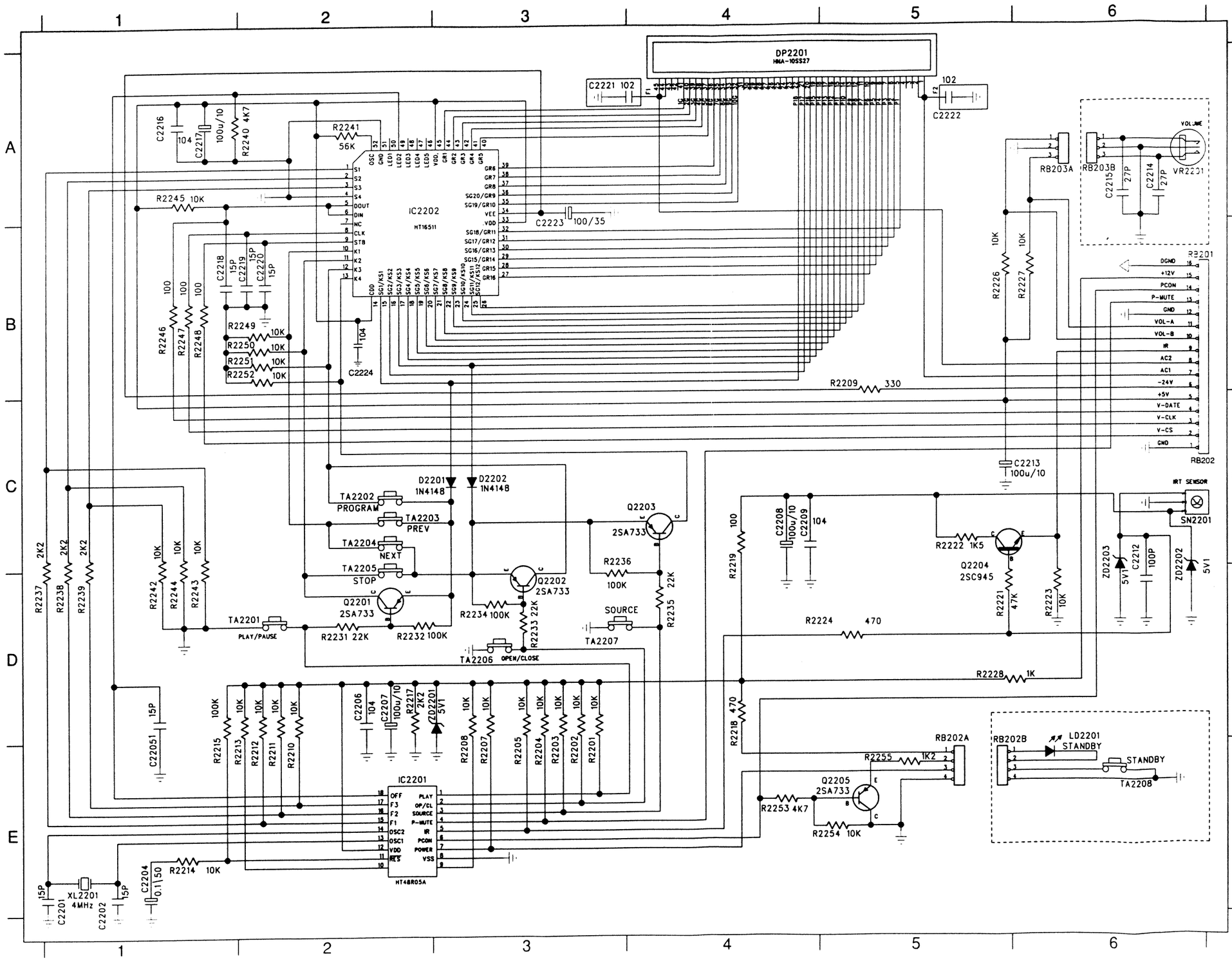
PIN NO.	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31~23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	F2	F2	NP	NP	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	NX	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NP	NP	F1	F1

Note

1. Fn: Filament pin
2. NP : No Pin
3. NX : No Extended Pin
4. nG : Grid Pin
5. PN : Anode Pin

5-2

CIRCUIT DIAGRAM - KEY BOARD

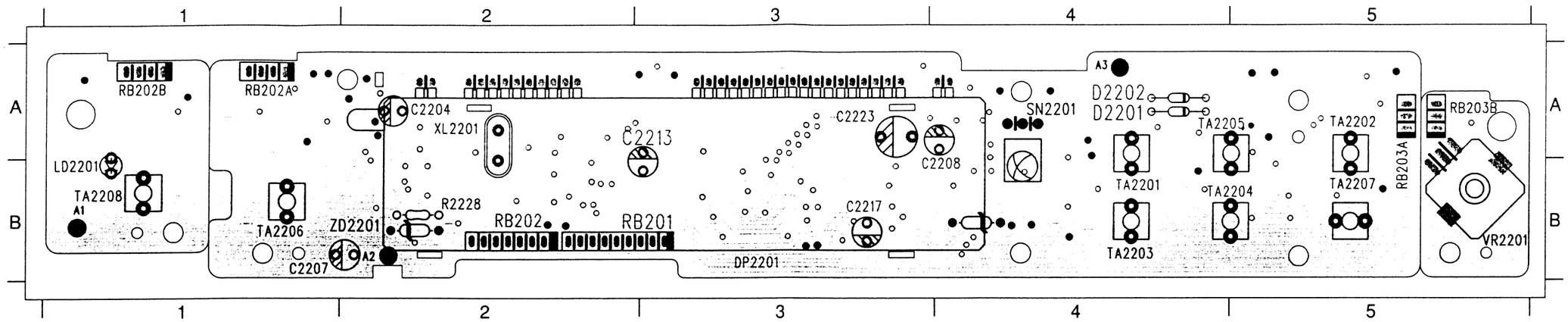


C2201	E1	R2251	B2
C2202	E1	R2252	B2
C2204	E1	R2253	E4
C2206	D2	R2254	E5
C2207	D2	R2255	E6
C2208	C4	RB201	B6
C2209	C4	RB202	C6
C2212	C6	RB202A	E5
C2213	C6	RB202B	E5
C2214	A6	RB203A	A6
C2215	A6	RB203B	A6
C2216	A1	SN2201	C6
C2217	A1	TA2201	D2
C2218	B1	TA2202	C2
C2219	B2	TA2203	C2
C2220	B2	TA2204	C2
C2221	A3	TA2205	C2
C2222	A5	TA2206	D3
C2223	A3	TA2207	D3
C2224	B2	TA2208	E6
C22051	D1	VR2201	A6
D2201	C2	XL2201	E1
D2202	C3	ZD2201	D2
DP2201	A4	ZD2202	D6
IC2201	E2	ZD2203	D6
IC2202	A2		
LD2201	E6		
Q2201	D2		
Q2202	D3		
Q2203	C4		
Q2204	D5		
Q2205	E5		
R2201	E3		
R2202	E3		
R2203	E3		
R2204	E3		
R2205	E3		
R2207	E3		
R2208	E3		
R2209	B5		
R2210	E2		
R2211	E2		
R2212	E2		
R2213	E2		
R2214	E1		
R2215	D1		
R2217	D2		
R2218	D4		
R2219	C4		
R2221	D5		
R2222	C5		
R2223	D6		
R2224	D5		
R2226	B5		
R2227	B6		
R2228	D5		
R2231	D2		
R2232	D2		
R2233	D3		
R2234	D3		
R2235	D4		
R2236	C3		
R2237	D1		
R2238	D1		
R2239	D1		
R2240	A2		
R2241	A2		
R2242	D1		
R2243	D1		
R2244	D1		
R2245	A1		
R2246	B1		
R2247	B1		
R2248	B1		
R2249	B2		
R2250	B2		

5-3

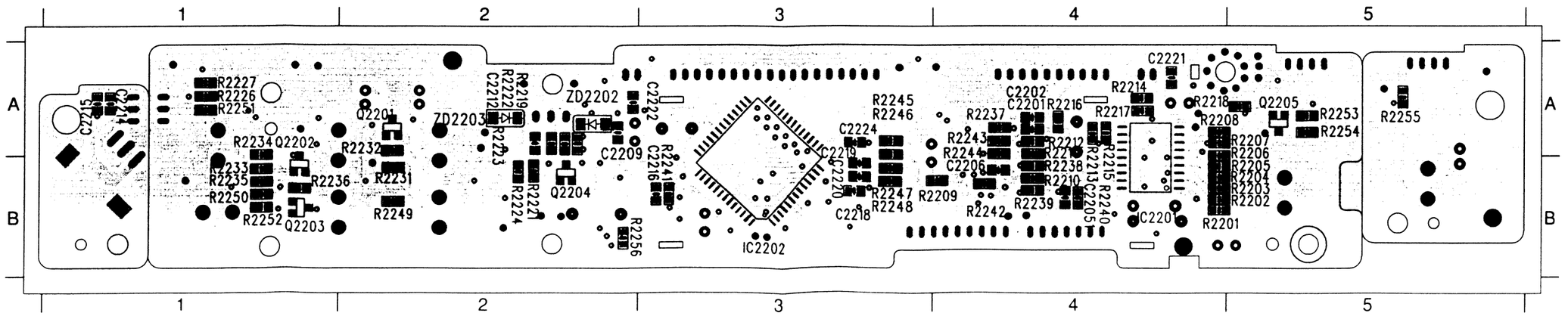
PCB LAYOUT - KEY BOARD (TOP)

C2204	A2	D2201	A4	RB202	B2	TA2201	B4	TA2207	B5
C2207	B1	D2202	A4	RB202A	A1	TA2202	A5	TA2208	B1
C2208	B4	DP2201	B3	RB202B	A1	TA2203	B4	VR2201	B5
C2213	A3	LD2201	B1	RB203A	A5	TA2204	B4	XL2201	A2
C2217	B3	R2228	B2	RB203B	A5	TA2205	A4	ZD2201	B2
C2223	A3	RB201	B3	SN2201	A4	TA2206	B1		



PCB LAYOUT - KEY BOARD (BOTTOM)

C2201	A4	C2219	A3	Q2202	A1	R2207	A5	R2216	A4	R2227	A1	R2239	B4	R2248	B3	ZD2202	A2
C2202	A4	C2220	B3	Q2203	B1	R2208	A4	R2217	A4	R2231	B2	R2240	B4	R2249	B2	ZD2203	A2
C2206	B4	C2221	A4	Q2204	B2	R2209	B4	R2218	A4	R2232	A2	R2241	B3	R2250	B1		
C2209	A2	C2222	A3	Q2205	A5	R2210	B4	R2219	A2	R2233	B1	R2242	B4	R2251	A1		
C2212	A2	C2224	A3	R2201	B4	R2211	A4	R2221	B2	R2234	A1	R2243	A4	R2252	B1		
C2214	A1	C22051	B4	R2202	B5	R2212	A4	R2222	A2	R2235	B1	R2244	A4	R2253	A5		
C2215	A1	IC2201	B4	R2203	B5	R2213	A4	R2223	A2	R2236	B1	R2245	A3	R2254	A5		
C2216	B3	IC2202	B3	R2204	B5	R2214	A4	R2224	B2	R2237	A4	R2246	A3	R2255	A5		
C2218	B3	Q2201	A2	R2205	B5	R2215	A4	R2226	A1	R2238	B4	R2247	B3	R2256	B2		



ELECTRICAL PARTS LIST - KEY (CONTROL / STANDBY / VOL) PCB

MISCELLANEOUS

SN2201	9965 000 26956	IRT RECEIVER IRM-2638F4
TA2201	9965 000 26950	AI TACT SW SKHVBE3520
TA2202	9965 000 26950	AI TACT SW SKHVBE3520
TA2203	9965 000 26950	AI TACT SW SKHVBE3520
TA2204	9965 000 26950	AI TACT SW SKHVBE3520
TA2205	9965 000 26950	AI TACT SW SKHVBE3520
TA2206	9965 000 26950	AI TACT SW SKHVBE3520
TA2207	9965 000 26950	AI TACT SW SKHVBE3520
TA2208	9965 000 26950	AI TACT SW SKHVBE3520
VR2201	9965 000 29233	ENCODER L20 A=12
XL2201	9965 000 23590	CRYSTAL 4MHZ HC-49US

DIODES

D2201	9965 000 26949	DIODE SW 1N4148
D2202	9965 000 26949	DIODE SW 1N4148
DP2201	9965 000 26957	VFD 100X25MM PIN

TRANSISTORS & INTERGRATED CIRCUITS

ZD2201	9965 000 26942	DIODE ZENR 5.0-5.2V 0.5W
ZD2202	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W
ZD2203	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W
IC2201	9965 000 23592	IC 18PIN HT48R05A-1
IC2202	9940 000 00907	IC 52 PIN TP6311QH
LD2201	9965 000 26953	LED 3 DIA RED ROUND
Q2201	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q2202	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q2203	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q2204	9940 000 00915	XISTR NPN 2SC1623
Q2205	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
R2237	9965 000 29234	CHIP RES. 2.2K OHM 1/10W 5%
R2238	9965 000 29234	CHIP RES. 2.2K OHM 1/10W 5%
R2239	9965 000 29234	CHIP RES. 2.2K OHM 1/10W 5%
R2240	9965 000 29235	CHIP RES. 4.7K OHM 1/10W 5%
R2241	9965 000 29236	CHIP RES. 56K OHM 1/10W 5%
R2242	9965 000 29237	CHIP RES. 10KOHM 1/10 W 5%
R2243	9965 000 29237	CHIP RES. 10KOHM 1/10 W 5%
R2244	9965 000 29237	CHIP RES. 10KOHM 1/10 W 5%
R2245	9965 000 29237	CHIP RES. 10KOHM 1/10 W 5%
R2246	9965 000 29238	CHIP RES. 100 OHM 1/10W 5%
R2247	9965 000 29238	CHIP RES. 100 OHM 1/10W 5%
R2248	9965 000 29238	CHIP RES. 100 OHM 1/10W 5%
R2249	9965 000 29237	CHIP RES. 10KOHM 1/10 W 5%
R2250	9965 000 29237	CHIP RES. 10KOHM 1/10 W 5%
R2251	9965 000 29237	CHIP RES. 10KOHM 1/10 W 5%
R2252	9965 000 29237	CHIP RES. 10KOHM 1/10 W 5%
R2253	9965 000 29235	CHIP RES. 4.7K OHM 1/10W 5%
R2254	9965 000 29237	CHIP RES. 10KOHM 1/10 W 5%
R2255	9965 000 29239	CHIP RES. 1.2K OHM 1/16W 5%
R2256	9965 000 26976	CHIP RES. 0 OHM JUMP WIRE

Note : Only the parts mentioned in this list are normal service spare parts.

VOLTAGES

IC2201 (HT480051)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
VOLTAGE	5.1	5.1	5.1	0	5.1	0	5.1	0	0	4.9	4.9	5.2	0	0	0	0	0	0		

IC2202 (PT16511)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOLTAGE	0	0	0	0	3.8	3.8	0	3.8	3.7	0	0	0	0		19.7	22.2	-22	-11.2	-19.9	-17.8
PIN	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
VOLTAGE	-21	-15.6	-13.4	-20	-13.4	-20	-22.4	-18	-20.3	-13.6	-15.8	-11.4	-4.6	-22.6	-20.4	-20.4	-20.4	-20.4	-20.4	-20.4
PIN	41	42	43	44	45	46	47	48	49	50	51	52								
VOLTAGE	-20.4	-20.4	-20.5	-20.4	4.6	4.6	4.6	4.6	0	4.6	0	4.6								

Q2201 (2SA733)

PIN	1	2	3
VOLTAGE	5	0	5

Q2202 (2SA733)

PIN	1	2	3
VOLTAGE	5	0	5

Q2203 (2SA733)

PIN	1	2	3
VOLTAGE	5	0	5

Q2204 (2SC1623)

PIN	1	2	3
VOLTAGE	4.6	4.2	4.2

Q2205 (2SA733)

PIN	1	2	3
VOLTAGE	5	0	5

TUNER BOARD

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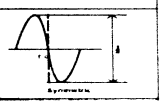
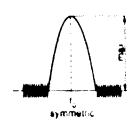
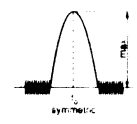
TUNER ADJUSTMENT TABLE

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
VARICAP ALIGNMENT						
FM 87.5 - 108MHz (50kHz grid)			108MHz	check		6.5V ±0.2V
			87.5MHz	check		1.0V ±0.5V
AM 530-1710kHz (10kHz grid) (21L / 21L / 37S)			1602KHz	check		7.8V ±0.2V
			531KHz	T005		1.1V ±0.5V
			1700KHz	check		8.0V ±0.1V
			530KHz	T005		1.1V ±0.2V
FM - IF						
FM	10.7MHz, 50mV continuous wave		IC001 pin 23 — short circuit to block AFC — 200P	No need to adjust		
FM - RF						
FM	108MHz	mod=1kHz Δf=±2.5kHz	106MHz	VC001	MAX	MAX
	87.5MHz		90.1MHz	L001		
AM IF						
AM	450kHz Connect pin 29 of IC001 (AM Osc.) with short wire to ground (pin 6)	Δf = ±5kHz V_{RF} = 3mV	IC001 pin 24 — R220 — 100nF	T001 T002	MAX	
AM AFC **MW**		ΔV=mV		T003		
AM RF 3)						
MW	1404kHz	Δf = ±3kHz V_{RF} as low as possible	1404kHz	VC001	MAX	
	576kHz		612kHz	T006		
	1400kHz		1400kHz	VC002		
	610kHz		610kHz	T006		

Use Service Testprogram. By selecting the TUNER TEST test frequencies will be stored as preset frequencies automatically.

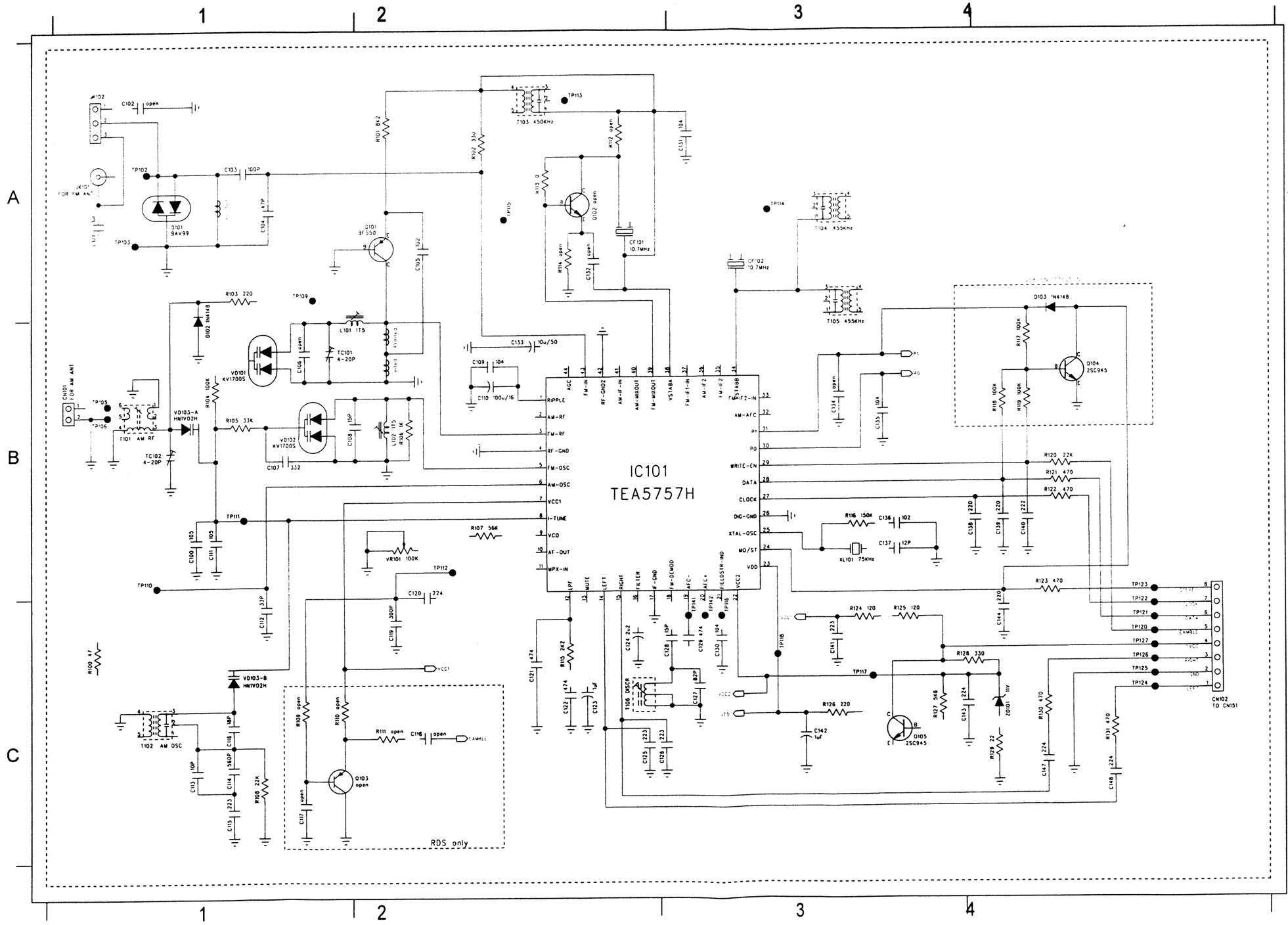
1) If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)

2) RC network serves for damping the IF-filter while adjusting the other one.

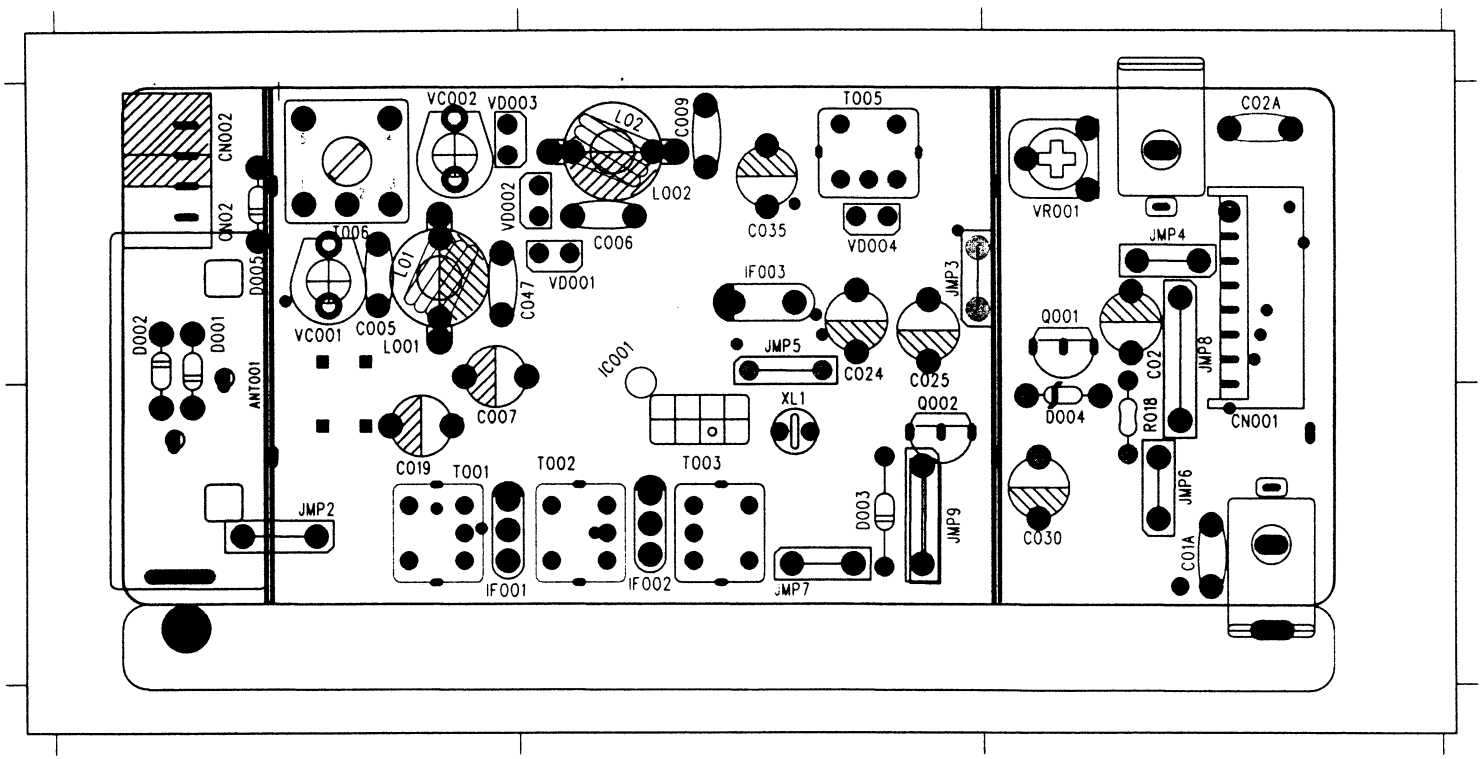
3) For AM RF adjustments the original frame antenna has to be used!

6-2

CIRCUIT DIAGRAM - TUNER BOARD



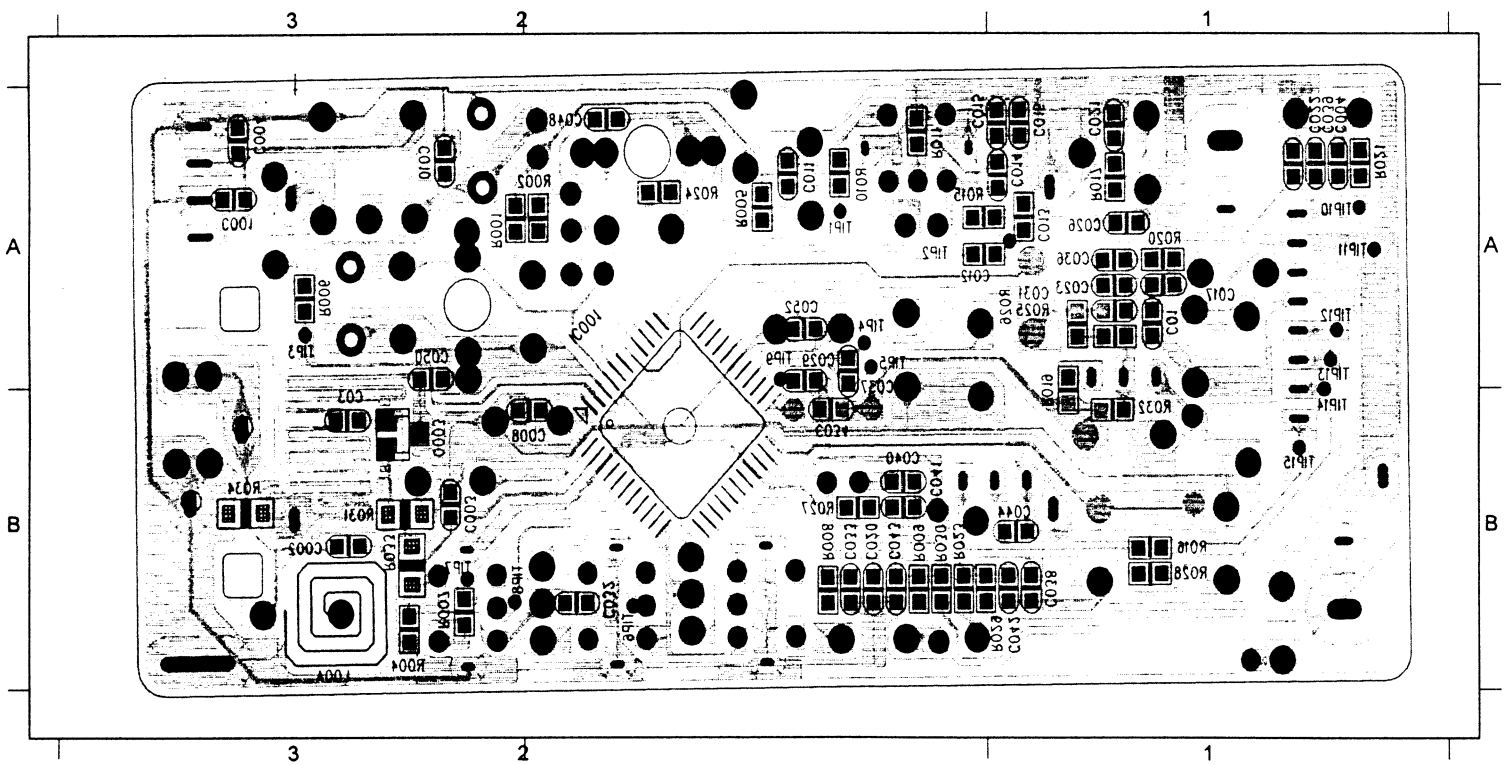
ANT001-	A1-	R004-	A2		
C002-	A1-	R005-	B2		
C005-	A1-	R006-	A1		
C007-	A2-	R010-	C1		
C006-	B2-	R011-	C1		
C008-	B2-	R015-	B2		
C009-	B2-	R016-	B4		
C01-	C4-	R017-	C2		
C02-	C3-	R018-	B3		
C03-	A2-	R019-	C3		
C010-	B1-	R020-	B4		
C011-	C1-	R021-	C4		
C012-	B2-	R023-	B4	A	
C013-	C2-	R024-	B2		
C014-	C1-	R025-	C3		
C015-	C1-	R026-	C3		
C016-	C1-	R027-	B3		
C019-	A2-	R028-	B4		
C020-	B3-	R029-	B4		
C021-	C2-	R030-	B4		
C022-	C2-	R032-	B3		
C023-	C2-	R033-	A2		
C024-	C2-	T001-	A2		
C025-	C2-	T002-	A4		
C026-	C2-	T003-	A4		
C029-	C3-	T005-	C1		
C030-	C3-	T006-	B1		
C031-	C2-	VC001-	A2		
C032-	A3-	VC002-	B1		
C033-	B3-	VD001-	B1	B	
C034-	C3-	VD002-	A1		
C035-	B2-	VD003-	B1		
C036-	B4-	VD004-	C1		
C037-	B3-	VR001-	B2		
C038-	B4-	XL1-	B3		
C039-	C4-				
C040-	B3-				
C041-	B3-				
C042-	B4-				
C043-	B4-				
C044-	B3-				
C047-	A1-				
C048-	B1-				
C0501-	A2-				
CN001-	C4-				
CN002-	B1-				
D001-	A1-				
D002-	A1-				
D003-	A4-				
D004-	C3-				
D005-	B1-			C	
IC001-	B3-				
IF001-	A3-				
IF002-	A3-				
IF003-	C3-				
L02-	B1-				
L001-	A2-				
Q001-	B3-				
Q002-	B4-				
Q003-	A2-				
R001-	A1-				
R002-	B1				


VC002
VD003
LO2
C009
T005
C02A
CN002
VR001
VD002
LO02
C035
VD004
T006
LO1
C006
JMP4
VD001
IF003
JMP3
Q001
C047
VC001
C005
LO01
JMP5
C024
C025
C02
JMP8
D002
D001
D005
ANT001
IC001
XL1
Q002
D004
R018
CN001
C007
C019
T001
T002
T003
JMP6
JMP2
D003
JMP9
C030
C01A
IF001
IF002
JMP7

6-4

PCB LAYOUT - TUNER BOARD (BOTTOM)

C01-	A3-	C013-	A3-	C023-	A3-	C037-	A2-	C048-	A2-	R005-	A2-	R019-	B3-	R028-	B3-
C03-	B3-	C014-	A3-	C026-	A3-	C038-	B3-	C050-	A3-	R006-	A3-	R020-	A3-	R029-	B3-
C001-	A3-	C015-	A2-	C029-	A2-	C039-	A3-	C052-	A2-	R007-	B3-	R021-	A3-	R030-	B2-
C002-	B3-	C016-	A3-	C031-	A3-	C040-	B2-	IC001-	A2-	R010-	A2-	R023-	B2-	R031-	B3-
C008-	B3-	C020-	B2-	C032-	A2-	C041-	B2-	Q003-	B3-	R011-	A2-	R024-	A2-	R032-	B3-
C010-	A3-	C021-	A3-	C033-	B2-	C042-	B3-	R001-	A3-	R015-	A2-	R025-	A3-	R033-	B3-
C011-	A2-	C022-	A3-	C034-	B2-	C043-	B2-	R002-	A3-	R016-	B3-	R026-	A3-	R034-	B3
C012-	A2	C023-	A3	C036-	A3	C044-	B3	R004-	B3	R017-	A3	R027-	B2		



ELECTRICAL PARTS LIST - TUNER PCB ASS'Y

MISCELLANEOUS

ANT001	9965 000 24668	RF JACK MALE TYPE 75 OHM
CN002	9965 000 15855	CONNECTOR S2B-XH-A 2 PIN
EF450-G1	9965 000 26963	TUNER PACK KWAGSUN
IF001	9965 000 24093	CERFILTER 3P 10.7MHZ
IF002	9965 000 26960	CER FILTER 3PIN 10.7M
T001	9965 000 24672	AM IFT 450KHZ 180PF Q=80MIN
T002	9965 000 24673	AM IFT 450KHZ 180PF Q=80MIN
T003	9965 000 24673	AM IFT 450KHZ 180PF Q=80MIN
T004	9965 000 24674	OSC COIL AM 120UH (796KHZ)
T005	9965 000 26964	ANT OSC AM 4-6:10T 1-3:86T
T006	9965 000 26966	BIAS COIL 78 KHZ
VC001	9965 000 26961	COND TRIM 4.2 - 20 PF N450
VD001	9965 000 26965	DIODE TUNG AM 1SV149B
VD002	9965 000 26965	DIODE TUNG AM 1SV149B
VR001	9965 000 26962	CNTL TRIMR 50KB 0.3
XL1	9965 000 23588	CRYSTAL 75KHZ +/-15
C031	9965 000 29240	CHIP CAP 0.022 UF 50V 10%
C032	9965 000 29241	CHIP CAP 0.1 UF 50V 10%
C034	9965 000 29241	CHIP CAP 0.1 UF 50V 10%
C035	9965 000 29242	CHIP CAP 15 PF 50V 5%
C036	9965 000 29243	CHIP CAP 0.22UF 50V 10%
C037	9965 000 29244	CHIP CAP 0.47 UF 50V 10%
C038	9965 000 29245	CHIP CAP 220 PF 50V 5%
C039	9965 000 29243	CHIP CAP 0.22UF 50V 10%
C040	9965 000 29246	CHIP CAP 12 PF 50V 5%
C041	9965 000 29247	CHIP CAP 0.001 UF 50V 10%

DIODES

D001	9965 000 26949	DIODE SW 1N4148 PB<1000PPM
D002	9965 000 26949	DIODE SW 1N4148 PB<1000PPM
D004	9965 000 26958	DIODE ZENR 11.1-11.6V 0.5W
D005	9965 000 19409	DIODE CHIP BAV16W/IN4148W

TRANSISTORS & INTERGRATED CIRCUITS

IC001	9965 000 26959	IC 44 PIN TEA5762H QFP44
Q001	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q002	4822 130 41198	2SC945P
Q003	4822 130 41198	2SC945P
Q004	9940 000 00921	XISTR PNP 2SA812 HFE:200-400

Note : Only the parts mentioned in this list are normal service spare parts.

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VOLTAGES

IC101 (TEA5757H)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOLTAGE(FM)	2.1	0.01	0.01	0.01	0.01	0.01	7.21	4.49	1	0.7	1.24	0.83	0.77	0.63	0.64	1.01	0.01	0	1.15	1.15
VOLTAGE(AM)	2.1	0.01	0.01	0.01	0.01	0.01	7.45	1.12	1.36	0.58	1.24	0.18	0.77	0.63	0.64	1.01	0.01	0	1.15	1.15
PIN	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
VOLTAGE(FM)	1.94	10.9	9.13	1.26	1.92	0.01	0.19	0.52	0.2	0.01	0.01	1.43	0.75	1.43	0.7	1.43	0.62	1.35	1.02	1.34
VOLTAGE(AM)	1.94	10.9	9.13	1.2	1.88	0.01	0.19	0.52	0.2	0.01	0.01	1.43	1.44	1.47	1.42	1.47	1.32	1.35	1.41	1.37
PIN	41	42	43	44																
VOLTAGE(FM)	1.35	0.01	0.75	0.15																
VOLTAGE(AM)	1.35	0.01	0.75	0.43																

Q101 (BF550)

PIN	1	2	3
VOLTAGE(FM)	0.01	0.66	0.01
VOLTAGE(AM)	0.01	0.66	0.01

Q104 (2SC945)

PIN	1	2	3
VOLTAGE(FM)	0.07	-0.03	1.3
VOLTAGE(AM)	0.08	0.01	1.24

Q105 (2SC945)

PIN	1	2	3
VOLTAGE(FM)	10.12	11.8	10.77
VOLTAGE(AM)	10.17	11.81	10.82

DVD LOADER

(For Information only)

It is not recommended for component repair on this module but to replace the module when it becomes defective.
Therefore no service parts list is published in this chapter.

The only service part available for replacement is:
DVD MECH. LOADER ASSY 9965 000 23573

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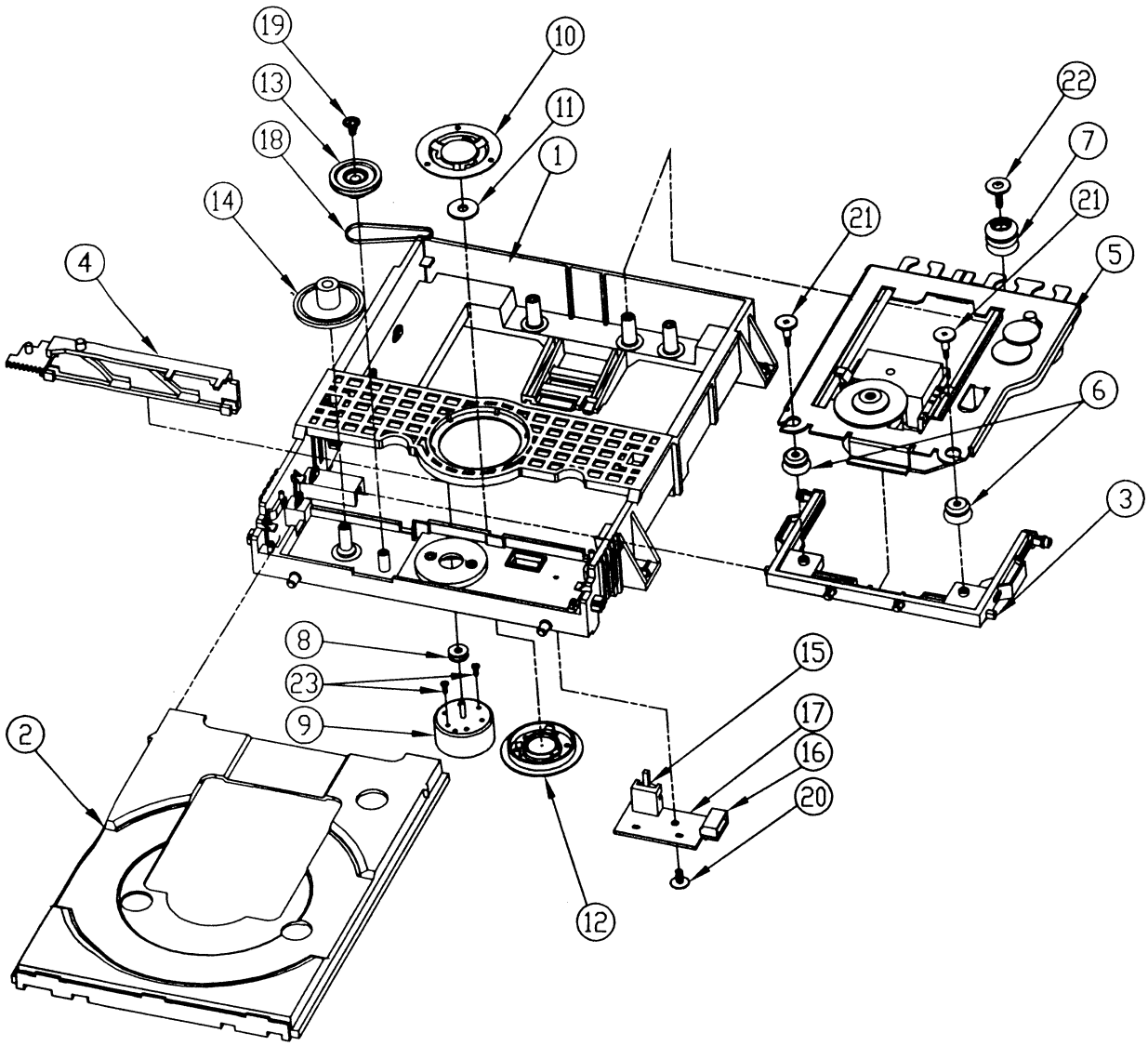
Ex plorer View - DVD Loader



MAIN BOARD

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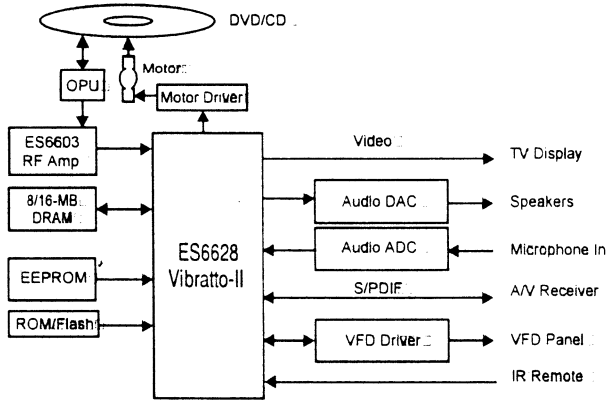
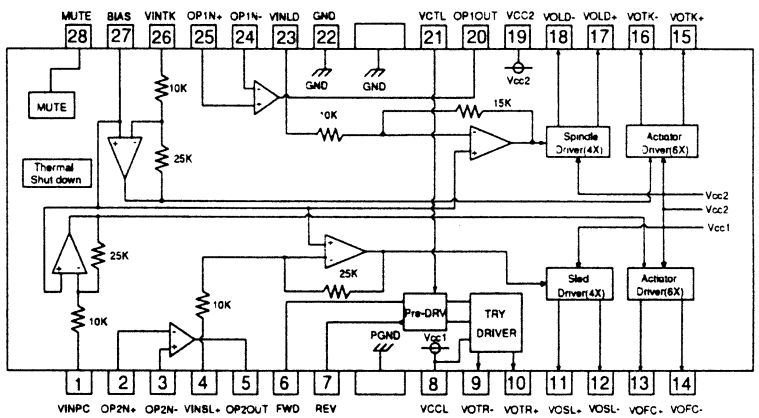
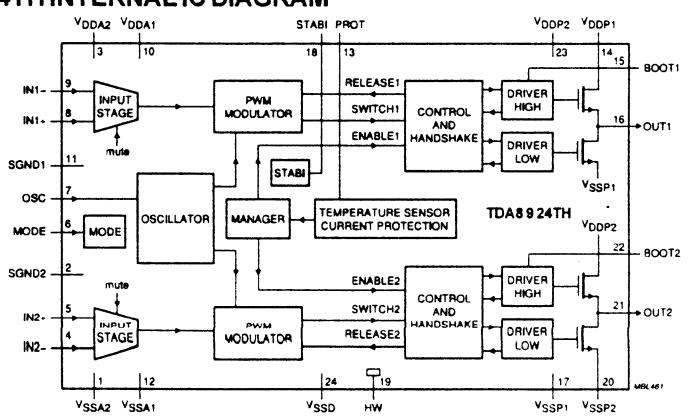
ES6628 F INTERNAL IC DIAGRAM



AM58 68 S INTERNAL IC DIAGRAM



TDA8 9 24TH INTERNAL IC DIAGRAM



VOLTAGES

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	3.3	1.77	1.77	1.77	3.3	3.3	3.3	1.5	0	3.3	1.4	1.5	1.5	1.5	1	0	0	0	3.3	0.1
PIN NO	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Voltage	3.3	2.8	3.1	3	0.2	0	2	0.2	3.3	3	1.3	1.3	1.4	0	3.3	1.4	1.3	1.3	1.2	1.3
PIN NO	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Voltage	1.4	1.4	0	3.3	1.5	1.1	1.2	1.2	1.2	1.3	1.6	0	3.3	0.1	3.3	0	0	0	0	0
PIN NO	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Voltage	0	3.3	1.3	1.6	2.6	1.8	1.2	2.5	0.7	0	2	2	1.1	1.7	2	2.6	2	0	3.3	2
PIN NO	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Voltage	2	2	3.3	3.3	3.3	0	2	0	3.3	0	0.7	0.9	1.7	1.4	0	3.3	1.7	1.8	1.6	1
PIN NO	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
Voltage	1.2	1.6	1.6	3.3	0	1.3	2.1	1.3	3.3	0.6	3.3	0	1	0.8	0.7	1.6	1	0	0	0
PIN NO	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
Voltage	0	1.5	1.6	1.6	1.2	3.3	0	3.3	3	3.6	3.6	3.6	0.2	3.3	3.3	3.3	0	2	1.3	0
PIN NO	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
Voltage	2	1.6	0	1.6	1.5	0	3.3	2.1	0.9	1.5	1.3	3.3	1.5	1.5	1.5	1.5	0	0	1.5	1.5
PIN NO	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
Voltage	1.5	3.3	0.6	2.19	1.5	1.5	0	1.5	3	3.3	2.1	1.5	1.7	1.5	1.6	1.7	2.5	2.5	0	2.4
PIN NO	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
Voltage	3.3	0	3.3	3.3	3.3	0	0	2.4	0	2.4	0	0.7	3.3	3.3	3.3	0	0	2.1	5	5
PIN NO	201	202	203	204	205	206	207	208												
Voltage	-0.4	-0.4	-0.4	4	4	3.3	3.1	0												

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	0	1.2	1.7	2.6	2	1.2	2.5	0.7	0	0	0	3.2	0	0	1.3	0	0	2.1	2.5	1.7
PIN NO	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Voltage	2	1.9	2.1	2.1	2.1	0	0	0	1.8	1.2	1.9	1.7	1.2	1.3	1.2	3.3	1.5	1.2	2	1.2
PIN NO	41	42	43	44	45	46	47	48												
Voltage	1.7	1.2	1.5	2	0	0	0	0												

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	3.3	1.3	3.3	1.2	1.4	0	1.4	1.3	3.3	1.1	1.1	0	1.4	3.3	0.1	3	3.1	3	2.8	0.2
PIN NO	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Voltage	0.2	0.1	0	0	0.5	1.5	3.3	0	1.4	1.5	1.5	1.5	1	0	0.1	1.8	3.3	1.6	0.1	0
PIN NO	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
Voltage	0	1.2	3.3	1.2	1.2	0	1.1	1.1	3.3	1.4	1.5	0	1.4	0						

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	0	3.8	1.2	1.7	3.8	4.3	1.4	0.8	0.1	0	5	4	0.1	1.5	4	0	1.9	1.2	3.5	3.3
PIN NO	21	22																		
Voltage	4.5	0																		

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	0	3.8	1.2	1.7	3.8	4.3	1.4	0.8	0.1	0	5	4	0.1	1.5	4	0	1.9	1.2	3.5	3.3
PIN NO	21	22																		
Voltage	4.5	0																		

PIN NO	1	2	3
Voltage	3.3	2.2	1.0

PIN NO	1	2	3
Voltage	5	3.3	0

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Voltage	0	0	0	0	0	0	5.6	0	3.8	3.8	0	0.1	0	0	0	5.8

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	0	1.7	1.7	3.3	0	0	0	0	0	0	0	0	0	5	5	0	5	5	0	0
PIN NO	21	22	23	24	25	26	27	28												
Voltage	0	0	0	0	0	0	0	5												

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

8-2

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	0	0	0	0	5.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIN NO	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Voltage	4.5	0	0	0	0	0	0	0	0	-6	0	0	0	0	0	0	0	0	0.1	0.1
PIN NO	41	42																		
Voltage	4.6	4.9																		

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

PIN NO	1	2	3	4	5	6	7	8
Voltage	0	0	0	-12	0	0	0	12

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	1.5	0.7	2	1.5	4.6	0	0	4.5	0	0	2.1	2.2	2.2	1.8	2.1	2.1	1.1	3.1	4.5	0.1
PIN NO	21	22																		
Voltage	1.2	1.1																		

PIN NO	1	2	3	4	5	6	7	8
Voltage	2.7	0	2.7	0	2.7	2.7	2.7	5.7

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	1.5	0.7	2	1.5	4.6	0	0	4.5	0	0	2.1	2.2	2.2	1.8	2.1	2.1	1.1	3.1	4.5	0.1
PIN NO	21	22																		
Voltage	1.2	1.1																		

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	1.5	0.7	2	1.5	4.6	0	0	4.5	0	0	2.1	2.2	2.2	1.8	2.1	2.1	1.1	3.1	4.5	0.1
PIN NO	21	22																		
Voltage	1.2	1.1																		

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	4.1	0	2.6	3	2.5	2.6	0	0	5.7	2.6	3	5.7	0	5.7						

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	3.5	3.5	2.6	2.6	2.6	2.6	3.8	3.8	2.7	2.6	2.7	2.7	2.6	2.6	2.7	2.7	2.6	2.6	5.1	2.6
PIN NO	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Voltage	3.9	5.1	0.2	0.2	0	3.3	0	2.6	0	0	0	1.5	2.4	0	3.9	1.6	3.3	2	1.5	1.6
PIN NO	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Voltage	1.6	2	4.2	4.2	3.3	3.3	2.7	0	1.5	0	0	2.5	2.5	3.5	3.5	2.5	2.4	5.1	4.3	4.3
PIN NO	61	62	63	64																
Voltage	3.2	3.1	0.8	3																

PIN NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Voltage	1.5	0.7	2	1.5	4.8	0	0	4.5	0	0	2.1	2.2	2.2	1.8	2.1	2.1	1.1	3.1	4.5	0.1
PIN NO	21	22	23	24	25	26	27	28	29	30										
Voltage	0	0	1.2	1.1	1.2	1.5	1.5	2	0	0										

Pin No.	1	2	3
Voltage	0.6	0	0

Pin No.	1	2	3
Voltage	0.6	0	0

Pin No.	1	2	3
Voltage	0.6	0	0

Pin No.	1	2	3
Voltage	0.1	0.7	0.7

Pin No.	1	2	3
Voltage	0.6	0	0

Pin No.	1	2	3
Voltage	5.6	14.4	6.2

Pin No.	1	2	3
Voltage	0	1.9	0

Pin No.	1	2	3
Voltage	0.6	0	0

Pin No.	1	2	3
Voltage	0.6	0	0

Pin No.	1	2	3
Voltage	0	0	0

Pin No.	1	2	3
Voltage	2.3	0	0

Pin No.	1	2	3
Voltage	0	2.3	0

Pin No.	1	2	3
Voltage	0.6	0	0

Pin No.	1	2	3
Voltage	4.8	0	4.8

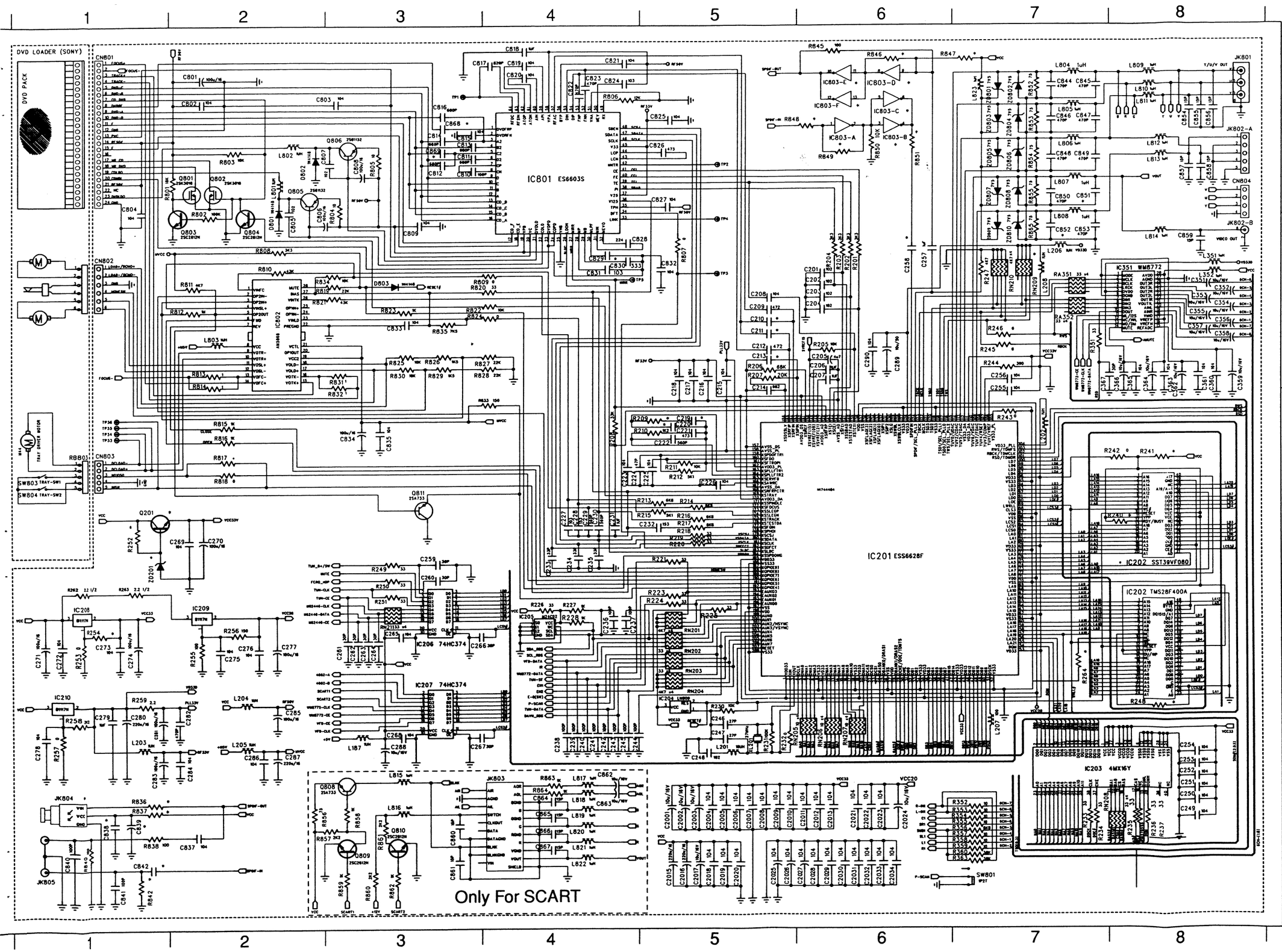
Pin No.	1	2	3
Voltage	3.8	2.0	0

Pin No.	1	2	3
Voltage	0.1	0	0.8

Pin No.	1	2	3
Voltage	14	14	

Pin No.	1	2	3
Voltage	0.6	0	0

Pin No.	1	2	3
Voltage	-12	-24	-13



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	C203	B6	C803	A3	IC801	A4	R801	A1
	C204	B6	C804	A1	IC802	B2	R802	A2
	C205	B6	C805	B2	J K801	A8	R803	A2
	C206	B6	C806	A2	J K802-A	A8	R804	A3
	C207	B6	C807	A2	J K802-B	B8	R805	A3
	C208	B5	C808	A3	J K805	E1	R806	A4
	C209	B5	C809	B3	L187	E3	R807	B5
	C212	B5	C810	A3	L201	E5	R808	B2
	C214	B5	C811	A3	L202	C7	R809	B2
	C215	B5	C812	A3	L203	D1	R810	B2
	C216	B5	C813	A3	L204	D2	R811	B2
A	C217	B5	C814	A3	L205	E2	R812	B2
	C218	B5	C815	A3	L206	B7	R813	B2
	C221	C5	C816	A3	L207	D7	R814	B2
	C222	C4	C817	A4	L351	B8	R815	C2
	C223	C4	C818	A4	L352	B8	R816	C2
	C224	C4	C819	A4	L801	A2	R818	C2
	C225	C5	C820	A4	L802	A2	R819	B2
	C226	C5	C821	A4	L803	B2	R820	B3
	C227	C4	C822	A4	L804	A7	R821	B2
	C228	C4	C823	A4	L805	A7	R822	B3
	C229	C4	C824	A4	L806	A7	R823	B3
	C230	C4	C825	A5	L807	A7	R824	B3
	C231	C4	C826	A5	L808	B7	R825	B3
	C232	C5	C827	A5	L809	A8	R826	B3
	C233	C4	C828	B4	L810	A8	R827	B3
	C234	C4	C830	B4	L811	A8	R828	B4
	C235	C4	C831	B4	L812	A8	R829	B3
	C236	D4	C832	B5	L813	A8	R830	B3
	C237	D4	C833	B3	L814	B8	R831	B3
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	C239	D4	C835	C3	Q801	A2	R833	C3
	C240	D4	C837	E2	Q802	A2	R834	B2
	C241	D4	C840	E1	Q803	B2	R835	B3
	C242	D4	C841	E1	Q804	B2	R838	E1
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	C244	D4	C845	A7	Q806	A3	R845	A6
	C245	D4	C846	A7	Q811	C3	R850	A6
	C246	D6	C847	A7	R201	B6	R852	A7
	C247	D6	C848	A7	R202	B6	R853	A7
	C248	E5	C849	A7	R203	B6	R854	A7
	C249	E8	C850	A7	R204	B6	R855	A7
	C250	E8	C851	A7	R205	B6	R865	B7
	C251	E8	C852	B7	R206	B5	RA351	B7
	C252	E8	C853	B7	R207	B5	RA352	B7
	C253	E8	C854	A8	R208	C4	RN201	D6
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	C257	B6	C858	A8	R213	C5	RN205	D6
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	C260	D3	C2001	E5	R215	C5	RN207	D6
	C261	D3	C2002	E5	R216	C5	RN208	E8
	C262	D3	C2003	E5	R217	C5	RN210	B7
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	C267	E3	C2008	E5	R223	D6	ZD802	A7
	C268	D3	C2009	E6	R224	D6	ZD803	A7
	C269	C2	C2010	E6	R225	D6	ZD804	A7
	C270	C2	C2011	E6	R226	D4	ZD805	A7
	C271	D1	C2012	E6	R227	D4	ZD806	A7
	C272	D1	C2013	E6	R228	D4	ZD807	A7
	C273	D1	C2015	E5	R230	D6	ZD808	A7
	C274	D1	C2016	E5	R231	E5	ZD809	B7
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	C276	D2	C2018	E5	R233	E7		
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	C278	E1	C2020	E5	R235	E8		
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	C286	E2	C2028	E6	R247	B7		
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	C357	B8	D802	A2	R262	D1		
	C358	B8	D803	B3	R263	D1		
	C359	B8	IC201	C6	R351	B7		
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	C363	B8	IC205	D4	R355	E7		
	C364	B8	IC206	D3	R356	E7		
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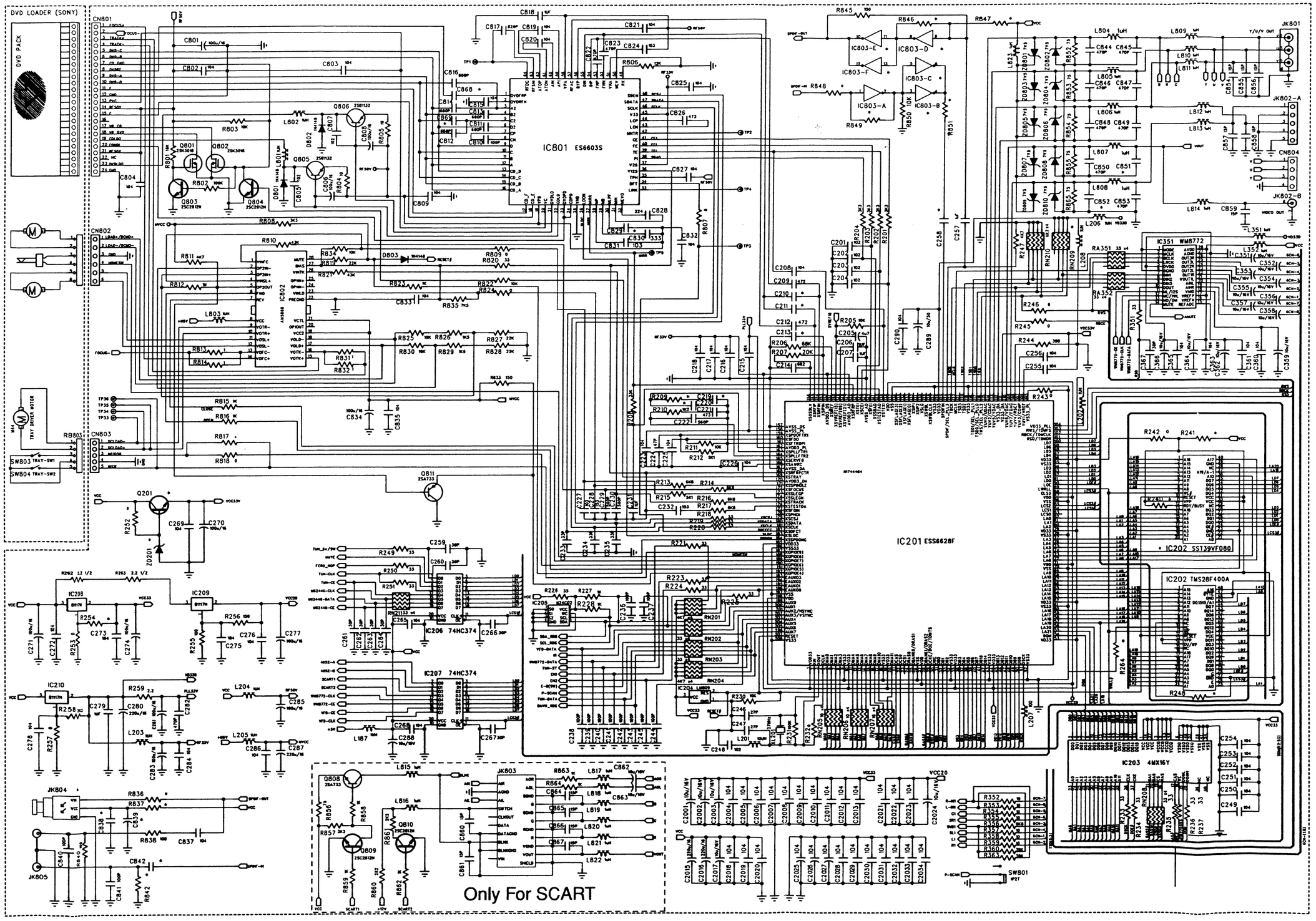

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C209	B5	C809	B3	L187	E3	R807	B5
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C214	B5	C811	A3	L202	C7	R809	B2
C215	B5	C812	A3	L203	D1	R810	B2
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C218	B5	C815	A3	L206	B7	R813	B2
C221	C5	C816	A3	L207	D7	R814	B2
C222	C5	C817	A4	L351	B8	R815	C2
C223	C4	C818	A4	L352	B8	R816	C2
C224	C4	C819	A4	L801	A2	R818	C2
C225	C5	C820	A4	L802	A2	R819	B2
C226	C5	C821	A4	L803	B2	R820	B3
C227	C4	C822	A4	L804	A7	R821	B2
C228	C4	C823	A4	L805	A7	R822	B3
C229	C4	C824	A4	L806	A7	R823	B3
C230	C4	C825	A5	L807	A7	R824	B3
C231	C4	C826	A5	L808	B7	R825	B3
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C233	C4	C828	B4	L810	A8	R827	B3
C234	C4	C830	B4	L811	A8	R828	B4
C235	C4	C831	B4	L812	A8	R829	B3
C236	D4	C832	B5	L813	A8	R830	B3
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C238	D4	C834	C3	L823	A7	R832	B3
C239	D4	C835	C3	Q801	A2	R833	C3
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C241	D4	C840	E1	Q803	B2	R835	B3
C242	D4	C841	E1	Q804	B2	R838	E1
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C256	B7	C857	A8	R212	C5	RN204	D6
C257	B6	C858	A8	R213	C5	RN205	D6
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C260	D3	C2001	E5	R215	C5	RN207	D6
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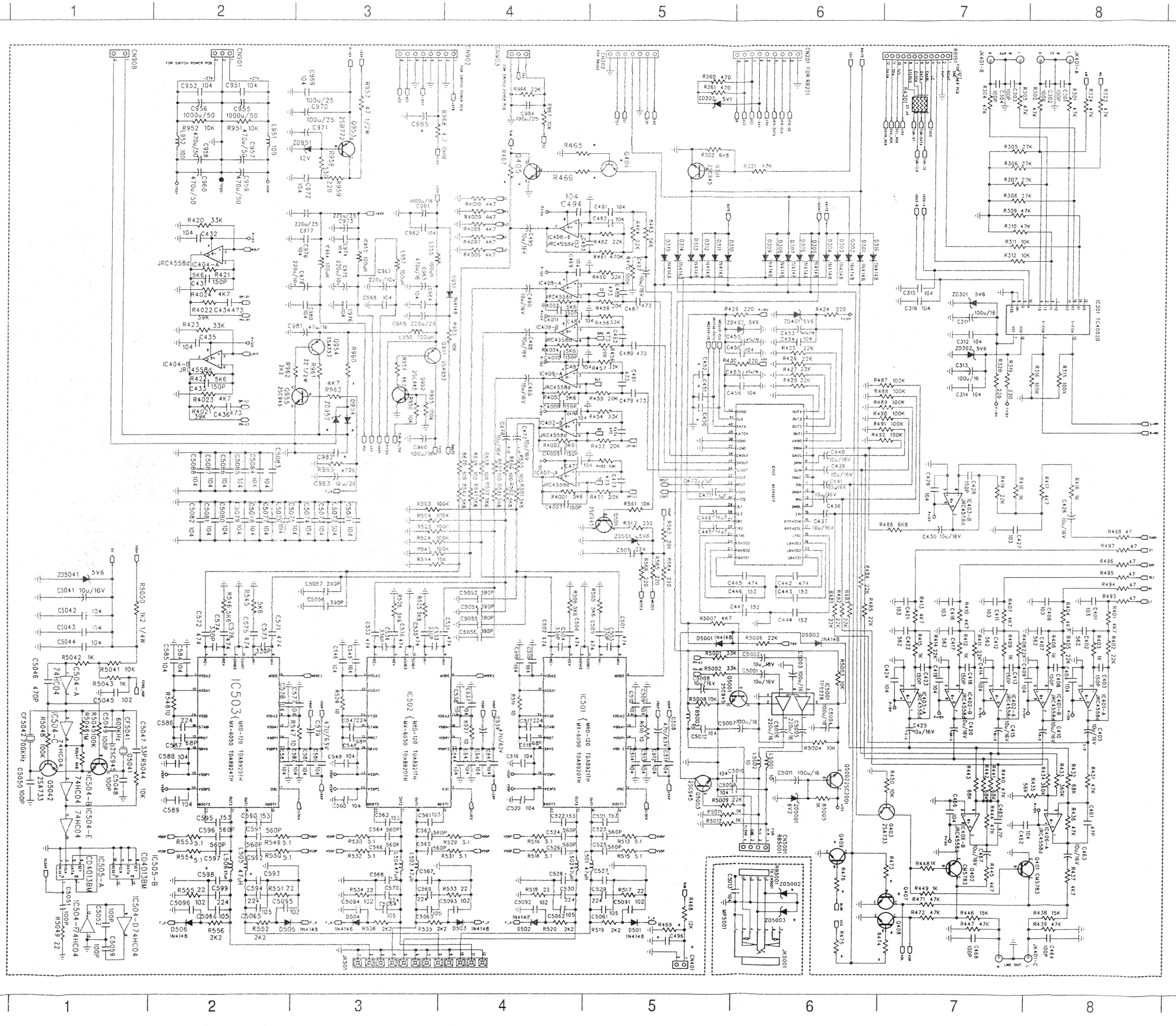

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C303	A7	C517	E4	C5005	E6	IC505-A	F1	R453	C5	R4005	B4
C304	A7	C518	E4	C5006	E6	IC505-B	F1	R454	C5	R4006	B4
C311	A7	C519	E4	C5007	E5	IC505-D	F1	R455	C5	R4007	B4
C312	B7	C520	E4	C5008	E5	IC505-F	F1	R456	B5	R4008	B4
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C402	D8	C524	F4	C5041	D1	J K401-B	A7	R461	B5	R4023	C2
C403	E8	C525	F5	C5042	D1	J K401-C	A7	R462	B5	R4024	B2
C404	E8	C526	F4	C5043	D1	J K501	F3	R463	B5	R5001	D5
C405	E8	C527	F5	C5044	D1	J K5001	F6	R464	B5	R5002	E5
C406	D8	C528	F4	C5045	E1	L501	F5	R470	B5	R5003	E6
C407	E8	C529	F5	C5046	E1	L502	F4	R471	F7	R5004	E6
C408	E8	C530	F4	C5047	E1	L503	F3	R472	F7	R5005	E6
C409	E8	C531	D4	C5048	E1	L504	F3	R481	D6	R5006	D6
C410	E8	C532	D3	C5049	D1	L505	F2	R482	D6	R5007	D5
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C415	E7	C537	E4	C5054	D4	L956	B3	R487	C7	R5041	E1
C416	D7	C538	E4	C5055	D4	L957	B3	R488	C7	R5042	D1
C417	D7	C539	E4	C5056	D4	L5001	E6	R489	C7	R5043	E1
C418	E7	C541	E4	C5057	D3	L5002	E6	R490	C7	R5044	E1
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C423	E7	C546	D3	C5063	F3	Q501	D5	R495	D8	R5049	F1
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C476	C4	C956	A2	D312	B5	R416	C8	R552	F2		
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C481	C5	C961	B3	D501	F5	R421	B2	R561	D5		
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C487	C4	C968	B3	D5001	D5	R428	C6	R656	C4		
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C490	B4	C970	A3	D5007	D5	R430	C6	R658	C4		
C491	B5	C971	A3	FB5003	E5	R431	E8	R659	C4		
C492	B5	C972	A3	IC301	B8	R432	E8	R670	C4		
C493	B4	C973	B3	IC401-A	E8	R433	E8	R951	A2		
C494	A4	C974	B3	IC401-B	E8	R434	E8	R952	A2		
C495	B4	C975	B3	IC402-A	E7	R435	E8	R953	B4		
C497	B5	C976	B3	IC402-B	E7	R436	E8	R954	C3		
C501	D5	C977	B3	IC403-A	E7	R437	F8	R955	C3		
C502	D4	C978	B3	IC404-A	B2	R438	F8	R956	C3		
C503	D5	C979	B3	IC404-B	C2	R439	F8	R957	A3		
C504	D4	C980	B3	IC405	C6	R440	E7	R958	A3		
C505	D5	C981	B3	IC406	F8	R441	E7	R959	A3		
C506	D4	C983	C3	IC407	C4	R442	E7	R961	C3		
C507	D5	C984	A4	IC408-A	B4	R443	E7	R962	C2		
C508	E5	C4007	C4	IC408-B	B4	R444	E7	R963	C3		
C509	E5	C4008	C4	IC409-A	C4	R445	F7	R965	C3		
C510	E5	C4009	C4	IC501	E4	R446	F7	R966	A4		
C511	E5	C4010	B4	IC502	E3	R447	F7	R967	A4		
C512	E5	C4011	B4	IC503	E2	R448	F7	R968	A3		
C513	E5	C5001	E6	IC504-A	E1	R449	F7	R4001	C4		
C514	E5	C5002	D6	IC504-B	E1	R450	E7	R4002	C4		

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PCB LAYOUT - MAIN BOARD (TOP)

| | | |

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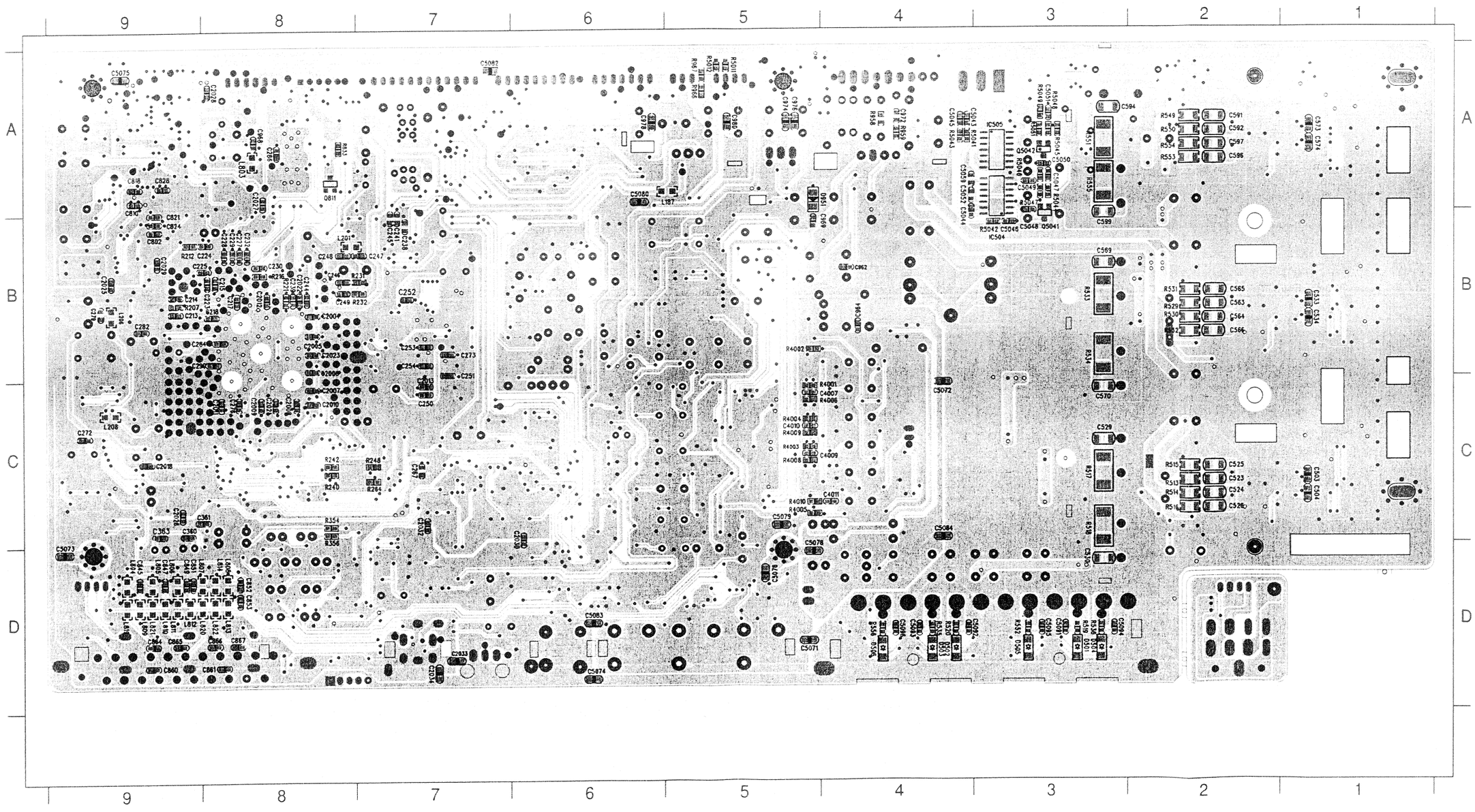
PCB LAYOUT - MAIN BOARD (BOTTOM)

C214	B9	C239	B6	C267	C7	C504	C1	C569	B3	C821	B9	C972	A4	C2012	B8	C4010	C5	C5071	D5	C5092	D3	IC505	A3	L811	D9	R242	C8	R529	B2	R555	A3	R4009	C5
C215	B8	C241	B7	C272	C9	C523	C2	C570	C3	C824	B9	C974	A5	C2013	C7	C4011	C4	C5072	C4	C5093	D4	L187	A5	L812	D9	R248	C7	R530	B2	R556	D4	R4010	C5
C217	B8	C244	B8	C273	B7	C524	C2	C573	A1	C828	A9	C976	A5	C2018	C9	C5043	A3	C5073	D9	C5094	D3	L201	B8	L813	D8	R354	C8	R531	B2	R833	A8	R5011	A5
C218	B6	C245	B7	C276	C8	C525	C2	C574	A1	C845	D9	C978	A6	C2021	C8	C5044	B4	C5074	D6	C5095	D3	L206	B9	L814	D8	R356	D8	R532	B2	R958	A4	R5012	A5
C223	B8	C246	B6	C279	B9	C526	C2	C591	A2	C847	D9	C980	A5	C2022	B8	C5045	A4	C5075	A9	C5096	D4	L208	C9	Q5041	B3	R513	C2	R533	B3	R959	A4	R5041	A3
C224	B8	C247	B7	C282	B8	C529	C3	C592	A2	C849	D9	C2004	B8	C2023	B8	C5046	B3	C5076	D5	D501	D3	L803	A8	Q5042	A3	R514	C2	R534	B3	R967	A5	R5042	B3
C225	B9	C248	B8	C284	B8	C530	D3	C594	A2	C851	D9	C2005	B8	C2025	B9	C5047	A3	C5078	D5	D502	D4	L804	D9	Q811	A8	R515	C2	R535	D4	R4001	C4	R5043	A4
C227	B8	C249	B8	C286	A8	C533	B1	C596	A2	C852	D8	C2006	C8	C2030	D6	C5048	B3	C5079	C5	D503	D4	L805	D9	R207	B9	R516	C2	R536	D3	R4002	B5	R5044	A3
C228	B8	C250	C7	C290	B8	C534	B1	C597	A2	C853	D8	C2007	C8	C2032	C7	C5049	A3	C5080	A6	D504	D3	L806	D9	R212	B9	R517	C3	R549	A2	R4003	C5	R5045	A3
C229	B8	C251	C7	C360	D9	C563	B2	C599	B3	C962	B4	C2008	C8	C2033	D7	C5050	A3	C5082	A7	D505	D3	L807	D8	R215	B8	R518	D3	R550	A2	R4004	C5	R5046	A3
C230	B8	C252	B7	C361	C8	C564	B2	C802	B9	C964	B4	C2009	C8	C2034	D7	C5051	A3	C5083	D6	D506	D4	L808	D8	R221	B8	R519	D3	R551	A3	R4005	C5	R5047	B3
C232	B8	C253	B7	C363	D9	C565	B2	C810	B9	C968	A8	C2010	C8	C4007	C4	C5052	A4	C5084	D4	D951	A4	L809	D9	R231	B7	R520	D4	R553	A2	R4006	C4	R5048	A3
C238	B7	C254	C7	C503	C1	C566	B2	C818	A9	C969	B4	C2011	C8	C4009	C4	C5059	A4	C5091	D3	IC504	B3	L810	D9	R232	B7	R522	D3	R554	A2	R4008	C5	R5049	A3



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ELECTRICAL PARTS LIST - MAIN BOARD

MISCELLANEOUS

CF5041	9965 000 23595	RES 2P 600KHZ ORANGE BOX
CN201	9965 000 27002	CONNECTOR 9 PIN
CN202	9965 000 27000	CONNECTOR 7 PIN
CN5001	9965 000 26994	CONNECTOR 4 PIN
CN801	9965 000 25152	CHIP CONNECTOR 24PIN
CN802	9965 000 26996	CONNECTOR 6 PIN
CN803	9965 000 26995	CONNECTOR 5 PIN
CN901	9965 000 25151	CONNECTOR 3 PIN CL3962WVO
CN902	9965 000 25149	CONNECTOR B8B-XH-A 8 PIN
CN903	9965 000 26993	CONNECTOR 3 PIN
FB5003	9965 000 26925	CHIP INDUC 10 UH 0.1 SMD
JK401	9965 000 24074	RCA JACK 6P WHTX3/RED
JK501	9965 000 25157	SPK JACK 12PIN
JK802	9965 000 25153	RCA+DIN JK 1RCA+4P
JK803	9965 000 29232	SCART SOCK 21PIN
JK805	9965 000 25156	RCA JACK 1 PIN BLAK
L187	9965 000 23594	CHIP INDUC 1UH 10%
L202	9965 000 26926	CHIP INDUC 1 UH 0.1
L203	9965 000 26926	CHIP INDUC 1 UH 0.1
L204	9965 000 26926	CHIP INDUC 1 UH 0.1
L205	9965 000 26926	CHIP INDUC 1 UH 0.1
L206	9965 000 23594	CHIP INDUC 1UH 10%
L207	9965 000 26944	CHIP BEAD 60 OHM 100MHZ
L208	9965 000 23594	CHIP INDUC 1UH 10%
L351	9965 000 26926	CHIP INDUC 1 UH 0.1
L352	9965 000 26926	CHIP INDUC 1 UH 0.1
L5001	9965 000 26938	INDUCTOR 100 UH 0.1
L5002	9965 000 26938	INDUCTOR 100 UH 0.1
L501	9965 000 23892	INDUCTOR 47UH 20% 4.3A
L502	9965 000 23892	INDUCTOR 47UH 20% 4.3A
L503	9965 000 23892	INDUCTOR 47UH 20% 4.3A
L504	9965 000 23892	INDUCTOR 47UH 20% 4.3A
L5041	9965 000 23594	CHIP INDUC 1UH 10%
L505	9965 000 23892	INDUCTOR 47UH 20% 4.3A
L506	9965 000 23893	INDUCTOR 33UH 20% 6A
L801	9965 000 26926	CHIP INDUC 1 UH 0.1
L802	9965 000 26926	CHIP INDUC 1 UH 0.1
L803	9965 000 23594	CHIP INDUC 1UH 10%
L804	9965 000 23895	CHIP INDUC 2.4UH 5%
L805	9965 000 23895	CHIP INDUC 2.4UH 5%
L806	9965 000 23895	CHIP INDUC 2.4UH 5%
L807	9965 000 23895	CHIP INDUC 2.4UH 5%
L808	9965 000 23895	CHIP INDUC 2.4UH 5%
L812	9965 000 23594	CHIP INDUC 1UH 10%
L813	9965 000 23594	CHIP INDUC 1UH 10%
L814	9965 000 23594	CHIP INDUC 1UH 10%
L815	9965 000 26926	CHIP INDUC 1 UH 0.1
L816	9965 000 26926	CHIP INDUC 1 UH 0.1
L817	9965 000 26926	CHIP INDUC 1 UH 0.1
L818	9965 000 26926	CHIP INDUC 1 UH 0.1
L819	9965 000 23594	CHIP INDUC 1UH 10%
L820	9965 000 23594	CHIP INDUC 1UH 10%
L821	9965 000 23594	CHIP INDUC 1UH 10%
L822	9965 000 23594	CHIP INDUC 1UH 10%
L823	9965 000 26926	CHIP INDUC 1 UH 0.1

RESISTORS

RB151	9965 000 27001	CONNECTOR 8 PIN
RN201	9965 000 23613	CHIP ARRAY 4X4.7KOHM
RN202	9940 000 00865	RES ARRAY 4X33R 1/10W 5%
RN203	9940 000 00865	RES ARRAY 4X33R 1/10W 5%
RN204	9965 000 23613	CHIP ARRAY 4X4.7KOHM
RN205	9965 000 23614	CHIP ARRAY 10 OHMX4
RN206	9965 000 23614	CHIP ARRAY 10 OHMX4
RN207	9965 000 23614	CHIP ARRAY 10 OHMX4
RN208	9940 000 00865	RES ARRAY 4X33R
RN210	9965 000 23613	CHIP ARRAY 4X4.7KOHM
RN211	9940 000 00865	RES ARRAY 4X33R 1/10W 5%
XL201	9965 000 23929	CRYSTAL27MHZ HC-49/US

CAPACTIORS

C511	9965 000 26917	CHIP CAP 0.1UF/100V X7R /- 0.1
C512	9965 000 26917	CHIP CAP 0.1UF/100V X7R /- 0.1
C523	9965 000 23896	CHIP CAP 560PF 100V 10%
C524	9965 000 23896	CHIP CAP 560PF 100V 10%
C525	9965 000 23896	CHIP CAP 560PF 100V 10%
C526	9965 000 23896	CHIP CAP 560PF 100V 10%
C527	9965 000 23605	COND MYLAR 0.01UF 100V 5%
C528	9965 000 23605	COND MYLAR 0.01UF 100V 5%
C541	9965 000 26917	CHIP CAP 0.1UF/100V X7R /- 0.1
C542	9965 000 26917	CHIP CAP 0.1UF/100V X7R /- 0.1
C563	9965 000 23896	CHIP CAP 560PF 100V 10%
C564	9965 000 23896	CHIP CAP 560PF 100V 10%
C565	9965 000 23896	CHIP CAP 560PF 100V 10%
C566	9965 000 23896	CHIP CAP 560PF 100V 10%
C567	9965 000 23605	COND MYLAR 0.01UF 100V 5%
C568	9965 000 23605	COND MYLAR 0.01UF 100V 5%
C580	9965 000 26917	CHIP CAP 0.1UF/100V X7R /- 0.1
C581	9965 000 26917	CHIP CAP 0.1UF/100V X7R /- 0.1
C591	9965 000 23896	CHIP CAP 560PF 100V 10%
C592	9965 000 23896	CHIP CAP 560PF 100V 10%
C593	9965 000 23605	COND MYLAR 0.01UF 100V 5%
C596	9965 000 23896	CHIP CAP 560PF 100V 10%
C597	9965 000 23896	CHIP CAP 560PF 100V 10%
C598	9965 000 23605	COND MYLAR 0.01UF 100V 5%
C951	9965 000 26917	CHIP CAP 0.1UF/100V X7R /- 0.1
C952	9965 000 26917	CHIP CAP 0.1UF/100V X7R /- 0.1
C955	5322 124 22614	1000UF20% 50V
C956	5322 124 22614	1000UF20% 50V
C961	9965 000 23606	COND ELECT 1000UF 16V 20%

DIODES

D301	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D302	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D303	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D304	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D305	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D306	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D307	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D308	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D309	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D310	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D311	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D312	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D313	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D314	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D315	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D316	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D317	9965 000 19409	DIODE CHIP BAV16W/IN4148W

Note : Only the parts mentioned in this list are normal service spare parts.

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D401	4822 130 83338	LL4148
D5001	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D5002	9965 000 19409	DIODE CHIP BAV16W/IN4148W
D801	4822 130 83338	LL4148
D802	4822 130 83338	LL4148
D803	4822 130 83338	LL4148
D951	9965 000 19409	DIODE CHIP BAV16W/IN4148W

TRANSISTORS & INTERGRATED CIRCUITS

ZD202	9965 000 26942	DIODE ZENR 5.0-5.2V 0.5W
ZD301	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W
ZD302	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5
ZD401	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W
ZD402	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W
ZD5001	9965 000 26941	DIODE ZENR 6.0-6.3V 0.5W
ZD501	9965 000 26930	CHIP ZENER 5.6V 0.05 0.5W
ZD801	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W
ZD802	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W
ZD803	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W
ZD804	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W
ZD805	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W
ZD806	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W
ZD807	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W
ZD808	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W
ZD809	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W
ZD810	9965 000 26931	CHIP ZENER 7.5V 0.05 0.5W
ZD951	9965 000 26940	DIODE ZENR 11.9-12.4V 0.5W
IC201	9965 000 21180	IC 208 PIN ES6628F PQFP ESS
IC202	9965 000 26936	IC 48 PIN MX26LV800BTC
IC202	9965 000 26937	IC 48 PIN M29LV1600T70 TSOP
IC203	9965 000 26918	IC 54 PIN SD41620HGT-6 TSOP
IC203	9965 000 26920	IC 54 PIN EDS6416AHTA-6B-E
IC204	9940 000 00834	IC 3PIN LM809
IC205	9965 000 23616	8PIN M24C02-MN6T ST SD8
IC206	9940 000 00835	IC 20PIN 74F374D
IC207	9940 000 00835	IC 20PIN 74F374D
IC207	9940 000 00835	IC 20PIN 74F374D
IC208	9965 000 26932	IC 3 PIN RT9164-33PLR
IC209	9965 000 26934	IC LD1117 ADJ SOT223 ST
IC210	9965 000 26919	IC B1117N 3.3V BAY-LINEAR 1A
IC301	9965 000 23619	IC 16 PIN CD4052BM SOIC TI
IC351	9965 000 26924	IC 28 PIN WM8772SEDS TSOP
IC401	9965 000 15886	IC RC4558D
IC402	9965 000 15886	IC RC4558D
IC403	9965 000 15886	IC RC4558D
IC404	9965 000 15886	IC RC4558D
IC405	9965 000 26921	IC 42 PIN M62446AFP
IC406	9965 000 15886	IC RC4558D
IC407	9965 000 15886	IC RC4558D
IC408	9965 000 15886	IC RC4558D
IC409	9965 000 15886	IC RC4558D
IC5001	9965 000 26923	IC 8 PIN APA3541-TRL SOP-8
IC501	9965 000 23618	24PIN TDA8921TH HSOP24
IC502	9965 000 23618	24PIN TDA8921TH HSOP24
IC503	9965 000 23618	24PIN TDA8921TH HSOP24
IC504	9965 000 23948	IC 14PIN 74HCU04D
IC505	5322 209 14477	HEF4013BT
IC801	9940 000 00853	IC 64PIN ES6603S
IC802	9965 000 23620	IC 28 PIN AM5868S HSOP
IC953	9965 000 26945	IC 3PIN BA50BC0T TO220FP
IC954	9965 000 26945	IC 3PIN BA50BC0T TO220FP
Q301	9940 000 00915	XISTR NPN 2SC1623
Q401	9965 000 13683	CHIP TRANS KTC3875Y-RTK
Q402	9965 000 13683	CHIP TRANS KTC3875Y-RTK
Q403	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q407	9965 000 13683	CHIP TRANS KTC3875Y-RTK
Q408	9965 000 13683	CHIP TRANS KTC3875Y-RTK
Q409	9965 000 13683	CHIP TRANS KTC3875Y-RTK
Q410	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q411	9965 000 13683	CHIP TRANS KTC3875Y-RTK
Q5001	9940 000 00915	XISTR NPN 2SC1623
Q5002	4822 130 41651	2SC2001L
Q5003	9940 000 00915	XISTR NPN 2SC1623
Q501	9940 000 00915	XISTR NPN 2SC1623
Q5041	9940 000 00915	XISTR NPN 2SC1623
Q5042	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q801	3141 018 51690	TRA SM 2SK3018
Q802	3141 018 51690	TRA SM 2SK3018
Q803	9965 000 26928	XISTR NPN 2SC2812N 2204
Q804	9965 000 26928	XISTR NPN 2SC2812N 2204
Q805	9965 000 26927	XISTR PNP 2SB1132RT100
Q806	9965 000 26927	XISTR PNP 2SB1132RT100
Q809	9965 000 26928	XISTR NPN 2SC2812N 2204
Q810	9965 000 26928	XISTR NPN 2SC2812N 2204
Q811	9940 000 00921	XISTR PNP 2SA812 HFE:200-400
Q951	9965 000 26939	XISTR PNP 2SA952 NEC
Q952	9940 000 00915	XISTR NPN 2SC1623
Q953	9965 000 26946	XISTR PNP 2SB772P/Q NEC
R262	9965 000 26947	RESISTOR 2 OHM 2W W/KINK
R263	9965 000 26948	RESISTOR 1 OHM 2W 0.05
R968	9965 000 27085	FUSEABLE RES 1? 1/4W 5%
RA301	9940 000 00865	RES ARRAY 4X33R 1/10W 5%
RA351	9940 000 00865	RES ARRAY 4X33R 1/10W 5%
RA352	9940 000 00865	RES ARRAY 4X33R 1/10W 5%

Note : Only the parts mentioned in this list are normal service spare parts.

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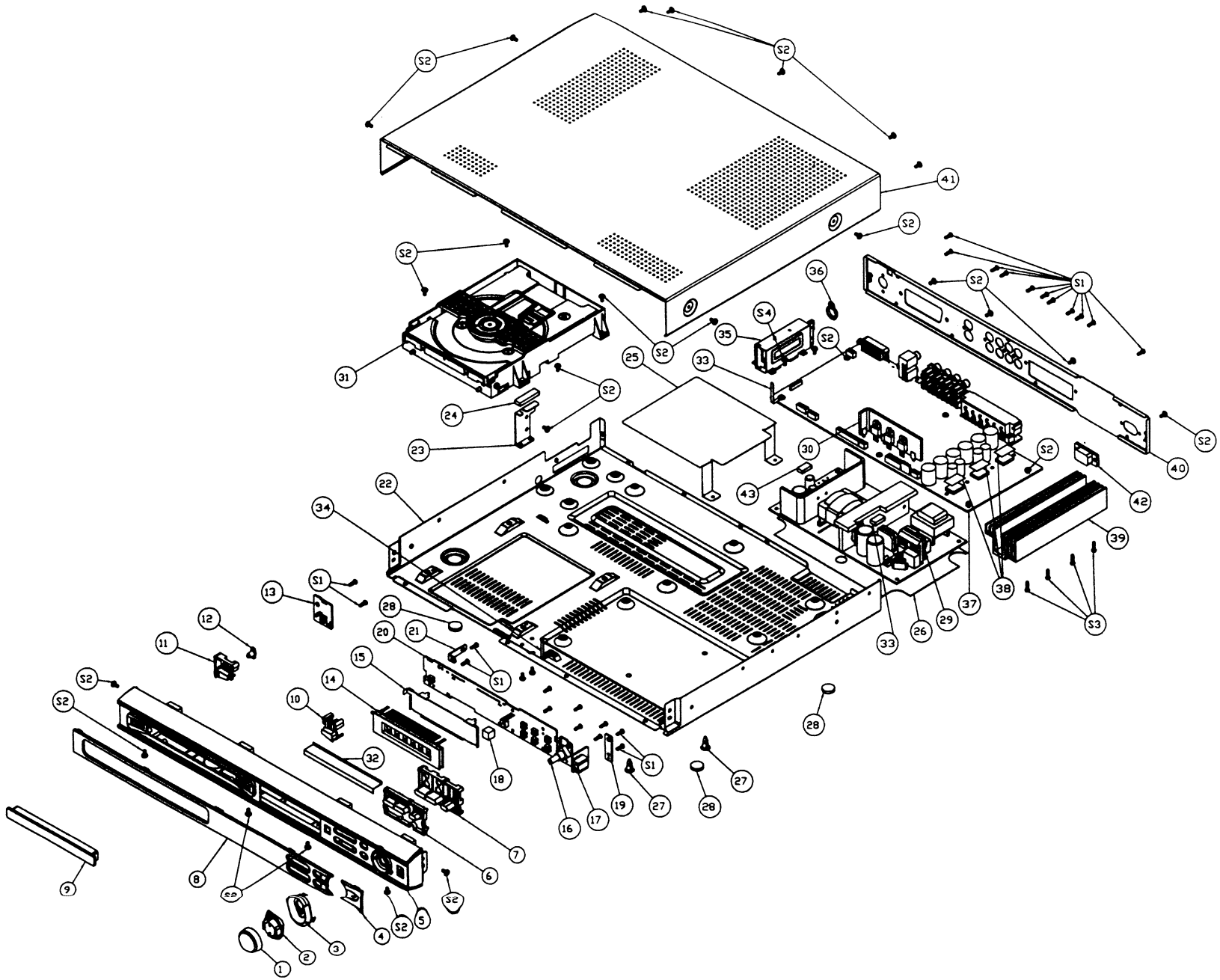
MECHANICAL EXPLODED VIEW



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MECHANICAL & ACCESSORIES PARTS LIST - MAIN UNIT

9965 000 29228	PH.JACK PCB
9965 000 29229	PH.BKT PCB
9965 000 26912	MAIN PCB ASS'Y LEAD FREE
9965 000 24684	CONTROL PCB ASSY
9965 000 26914	FRONT PANNEL HIPS
9965 000 23575	FM ANTENNA HOLDER
9965 000 23639	VOLUME KNOB ABS
9965 000 23649	POWER BUTTON ABS
9965 000 23644	FUNCTION BUTTON 1 ABS
9965 000 23648	OPEN/CLOSE BUTTON ABS
9965 000 23645	FUNCTION BUTTON 2 ABS
9965 000 23642	VOLUME KNOB LENS PMMA
9965 000 23646	DISPLAY LENS PMMA
9965 000 23650	POWER LED LENS PMMA
9965 000 23641	VOLUME RING ABS
9965 000 23640	VOLUME DOCKING ABS
9965 000 23571	FOOT RUBBER DIA14XT3MM WHITE
9965 000 25160	SUBWOOFER ASSY 50W
9965 000 29230	REAR PANEL SCART
9965 000 19380	FFC WIRE 24P 150MM
9965 000 29231	GP SCART CABL 1000MM BLACK
9965 000 23582	LOOP ANT 1200MM 1007#26 6TS
9965 000 23583	FM ANTENNA 1000MM 1007#24 TC
9965 000 26916	REMOTE CONTROL 45KEY (3139238044
9965 000 26913	SW PWR SUPPLY AY INPUT 230V

SATELLITE SPEAKER ASSEMBLY BREAKDOWN

9965 000 24689	SPEAKER BOX MX2500D FRONT-L
9965 000 24690	SPEAKER BOX MX2500D FRONT-R
9965 000 24691	SPEAKER BOX MX2500D REAR-L
9965 000 24692	SPEAKER BOX MX2500D REAR-R
9965 000 24693	SPEAKER BOX MX2500D CENTER
9965 000 23627	RUBBER FOOT

Note : Only the parts mentioned in this list are normal service spare parts.

POWER BOARD

(For Information only)

It is not recommended for component repair on this board but to replace the board when it becomes defective.
Therefore no service parts list is published in this chapter.

The only service part available for replacement is:
SW PWR SUP ASSY INPUT 230V 9965 000 26913

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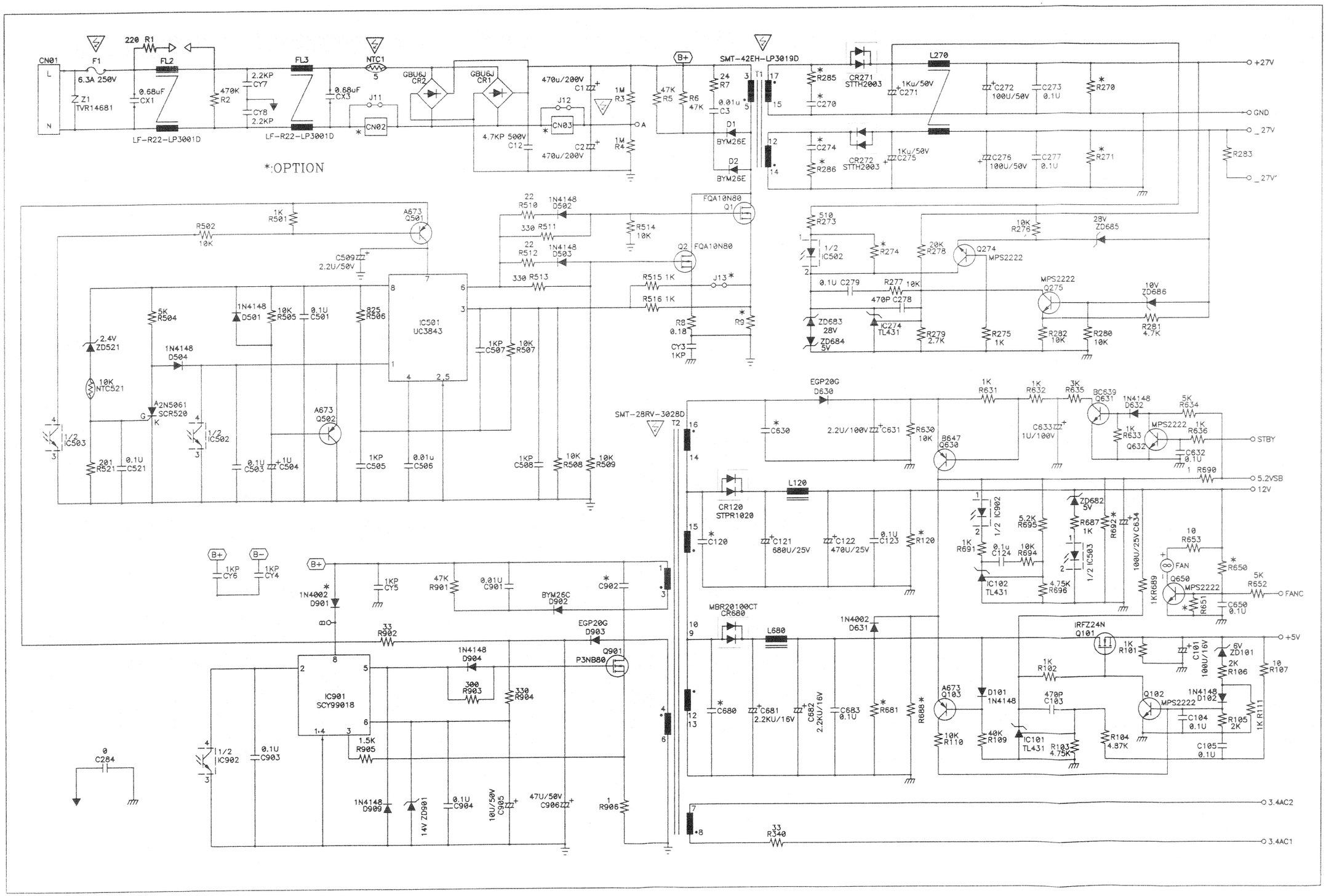
PCB Layout 10-2

CIRCUIT DIAGRAM - POWER BOARD (/01)



PCB LAYOUT - POWER BOARD (/01)